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City of Birmingham.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1912.

BIRMINGHAM:
Hudson and Son, Printers, Edmund Street and Livery Street.
1913

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Public Health and Housing Department,
The Council House,
Birmingham,

July, 1913.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND HOUSING COMMITTEE.

Gentlemen,

I beg herewith to submit the annual report on the health of Birmingham, which I am required to make by Order of the Local Government Board at the end of each year.

It may be said that the year 1912 was the best on record as regards freedom from fatal illness. It is even more satisfactory, however, to be able to state that for several years the mortality rate has shown a continuous decline.

This progressive decline in mortality is due to two quite distinct groups of causes. On the one hand the lowering of the birth-rate is at present causing a smaller part of the total population to be of an age when mortality is greatest. If during 1912 there had been no infants at all under one year of age in our population, our mortality rate would have been 11·5 per 1,000 instead of 14·1 per 1,000.

Much of the progressive decline in the death-rate is due, however, to substantial advances in the general health conditions under which the people now live, and which are evident in every area of the City. These advances are largely due to better knowledge on the part of the masses of the people as to what constitutes healthy living, and to a lesser extent to administrative control.

Everybody who has been brought into intimate contact with the people cannot help recognising what a powerful influence general education is having in bringing about the decline in mortality and in sickness. As an instance of this better knowledge on the part of the people, one would mention the fact that the back-to-back courtyard houses of the City are every year becoming more difficult to let, while the demand for decent suburban dwellings is increasingly great.

Again, it is much more difficult, and in some cases almost impossible, to let houses with pail closets or privies, while formerly such houses were tolerated and thought to be reasonably healthy.

A very large number of other instances might be given to bear out the general contention that it is increased knowledge on the part of the people which is inducing them to seek for better houses and better surroundings. It is not quite so evident, but equally true, that there is progressive enlightenment in all matters which make for improved health.

There still remains, however, an enormous amount to be done, which is quite obvious and apparent to the merest tyro in social reform. There were in the central areas even in the year 1912, which may be said to have been one of unprecedented prosperity, hundreds of families living in the most squalid poverty. To a very large extent these are the inefficients out of a population of one million, and it is because of their inefficiency that the problem of dealing with them is so exceptionally difficult.

The chief points that I think the Public Health and Housing Committee require to have before their minds continuously are the following:—

1. A gradual bettering of the standard of housing accommodation until every town dweller has a self-contained house with sufficient space round or near it to make it a pleasant place to live in.

2. A much higher degree of cleanliness—personally, in the dwelling house, in the workshop, in the City, and in the food supply. To a very great extent the difference in mortality in various areas in the City is due to the presence or absence of dirtiness in one form or another. Many of these are matters which cannot be accomplished by the municipality by ordinary administrative measures. I feel strongly, however, that betterment in this direction is none the less the duty of a public health authority, and that in future our methods of procedure must be even more largely educative than in the past.

The year 1912 saw the commencement of sanatorium benefit under the National Insurance Act. The expression "Sanatorium Benefit" has always appeared to me to be an unfortunate one, as it has encouraged the hope that a sanatorium was going to be the main line of attack on the disease. It is very important that the general public should know that they can to a very large extent prevent tuberculosis by living and working under clean and wholesome conditions, and particularly by having an abundance of fresh air, which even in the centre of the City costs nothing and is of good quality.

A large amount of time was expended by the Public Health and Housing Committee in considering the various proposals for carrying out sanatorium treatment. Fortunately we were able to give a small measure of sanatorium treatment at once, owing to the fact that Birmingham had been perhaps as well, if not better, equipped than any other town by reason of its existing staff of tuberculosis visitors and its two working sanatoria.

The year under review is the first during which an approximate idea can be obtained of the number of obviously active cases of pulmonary tuberculosis which exist in the City. No less than 4,394 cases were notified during the year, *i.e.*, four times the number of deaths. For a considerable number of years the deaths have been approximately 1,000 per annum. If the incidence of tuberculosis has been similar to that in 1912, then at least 75 per cent. of the cases have recovered either spontaneously or by the treatment they have received. From this and other facts known it may be said that pulmonary tuberculosis in an early stage, instead of being the most deadly of diseases, is one in which the percentage of recoveries has been in the past very considerable, so that there are good grounds for hoping that the additional assistance which sanatorium benefit will bring will increase the number of recoveries very considerably.

During 1912 a larger amount of work was done under the Housing Acts than in any previous year, and it was possible to obtain work of better quality than ever before. The number of really insanitary houses annually destroyed in Birmingham is very large. It is unfortunately true that new accommodation is not being provided at the present time at a sufficiently quick rate to accommodate the tenants who desire to leave the central areas.

During the year 1912 the staff of the Public Health and Housing Department was moved from the old, very cramped, and in some instances insanitary, accommodation at the Council House, Victoria Square, to the new Council House Extension in Congreve Street, where at present there is ample accommodation. In 1903, shortly after coming to Birmingham, I reported to the Health Committee that it was difficult to administer a staff housed under the conditions then existing, and that better accommodation was necessary. Largely as a result of that report the accommodation now provided was arranged. It may be said that the accommodation is excessive, but it cannot be sufficiently recognised that every year additional work, requiring a larger staff, is put upon the Public Health and Housing Department, and that provision must be made in a new building for this extension of duties in the near future. The staff now housed at the Council House Extension comprises 6 medical officers, 27 male clerks, 62 male inspectors, disinfectors, etc., and 38 women workers.

I would like to again record the good feeling which exists among the members of the staff and the loyal way in which they have worked during the year, and, in conclusion, to thank your Committee for the way in which they have dealt with the staff and myself during the year on all occasions.

I am, Gentlemen,

Your obedient servant,

JOHN ROBERTSON, M.D., B.Sc.

City of Birmingham.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

For the Year 1912.

POPULATION.

On June 30th, 1912, the estimated population of the City was 850,947 persons, of whom 405,668 were males and 445,279 females.

During the year 1912, the population is estimated to have increased by 8,610. The excess of births over deaths was 10,163, so that apparently the number of people who left the town exceeded those who came into it by 1,553.

The rate at which Birmingham increased its population during the intercensal period 1901-1911 was 10·7 per cent., *i.e.*, from 759,063 to 840,202.

The rate of increase in previous intercensal periods was as follows:—

Census 1871	17·2	percentage increase.
,, 1881	19·0	,, ,,
,, 1891	9·4	,, ,,
,, 1901	9·2	,, ,,
,, 1911*	10·7	,, ,,

* Enlarged City.

The rates of increase in other large towns are shown below. The tendency within recent years among people who can afford it to live at considerable distances beyond the municipal boundaries, *e.g.*, in the case of Birmingham at Sutton Coldfield, Solihull, etc., etc., will make such a comparison only relatively trustworthy.

Increase of Population in Great Towns.

	Census Population, 1911.	Intercensal Increase, 1901-11.
Birmingham	840,202	10·7%
Liverpool	746,421	6·0%
Manchester	714,333	10·8%
Sheffield	459,916	11·9%
Leeds	445,550	3·9%
Bristol	357,048	5·3%
West Ham	289,030	8·1%
Bradford	288,458	3·1%
Hull	277,991	15·7%
Newcastle-on-Tyne	266,603	7·9%
Nottingham	259,904	8·4%
Stoke-on-Trent	234,534	9·2%
Salford	231,357	4·7%
Portsmouth	231,141	22·3%
Leicester	227,222	7·4%

The decennial increase of population in the whole of England and Wales as ascertained at the 1911 Census was 10·9%, so that Birmingham has increased at about the same rate as the country as a whole. It must be remembered, however, that the rate of increase for 1911 was the lowest ever recorded for England and Wales.

The rate of increase in Birmingham as in the rest of the country has only been maintained by reason of the great reduction in the rate of mortality which has recently been recorded. The decline which is going on in the birth-rate is continuing, but it is not likely that the rapid reduction in mortality can go on, so that apparently there must soon come a period when the population of this country will be stationary or declining.

The rate of increase of some of the important countries is set out in the following table :—

INCREASE IN POPULATION IN DIFFERENT COUNTRIES.

	Increase per cent. in Intercensal Period.		
	1881-1891.	1891-1901.	1901-1911.
England and Wales	11·7	12·2	10·9
Scotland	7·8	11·1	6·4
Ireland	–9·1	–5·2	–1·7
Australia	41·1	18·9	18·1
New Zealand	27·9	23·3	30·5
Canada	11·8	11·1	34·1
India	13·2	2·5	7·1
South Africa	—	—	15·1
Germany	9·3	14·0	15·2
France	1·8	1·6	1·6
Holland	12·4	13·1	14·8
Belgium	9·9	10·6	10·9
Denmark	10·3	12·8	12·6
Sweden	4·8	7·3	7·5
Norway	10·3	12·0	6·8
Italy	—	—	6·8
United States	25·5	20·7	21·0

The practical point to be noted above is that several countries show an accelerated rate of growth in recent years, *e.g.*, Sweden, Belgium, Holland, and Germany.

The recent Census has shown that 78·1 per cent. of the population of this country now live in towns, leaving the rural areas with 21·9 per cent., while sixty years ago the proportions were 50·2 per cent. in urban areas, and 49·8 in rural areas.

It is obvious that the towns do not now have more than one-half of the rural population to recruit from which they had when urbanisation commenced. This is bound to have a powerful influence on our Birmingham population, for there are far more families of country origin within one or two generations than there are of families born here for many generations.

At the census of 1911 in the enlarged City there were 1,098 females for every 1,000 males. In the old City there were 1,072, against 1,072 in 1901 and 1,067 in 1891. In Edgbaston Ward the proportion in 1911 was 1,480 against 1,098 in the whole City. In England at the same time the proportion was 1,068 females for every 1,000 males.

In certain of the largest English towns the proportion of females to 1,000 males was as follows :—

PROPORTION OF FEMALES TO MALES.

Birmingham	1,098	Leeds	1,104
Liverpool	1,085	Bristol	1,183
Manchester	1,080	West Ham	1,025
Sheffield	1,026	Bradford	1,161

In Germany the proportion is 1,026, while in Canada it is 886.

In the next table will be found the estimated population for each Ward in the City for 1912, together with its area and the density of its population on space, and the number of females per 1,000 males.

DISTRIBUTION OF THE POPULATION IN WARDS.

WARD	Estimated. Population.*	Area in Acres.	Persons per Acre.	Females to 1,000 Males.
Acock's Green	25,204	2,229	11·3	1,109
All Saints'	41,745	520	80·3	1,032
Aston	40,851	606	67·4	1,049
Balsall Heath	39,158	457	85·7	1,101
Duddeston and Nechells	41,023	536	76·5	1,042
Edgbaston	33,253	2,639	12·6	1,480
Erdington (North)	14,925	2,603	5·7	1,167
Erdington (South)	16,254	2,032	8·0	1,136
Handsworth	25,756	1,415	18·2	1,204
Harborne	14,875	2,379	6·3	1,165
King's Norton	20,637	3,749	5·5	1,146
Ladywood	29,061	299	97·2	1,062
Lozells	33,982	354	96·0	1,129
Market Hall	17,330	339	51·1	1,118
Moseley and King's Heath	24,998	1,838	13·6	1,354
Northfield	7,313	6,406	1·1	1,075
Rotton Park	38,959	685	56·9	1,036
St. Bartholomew's	36,987	520	71·1	1,009
St. Martin's and Deritend	39,347	410	96·0	998
St. Mary's	32,111	355	90·5	1,024
St. Paul's	29,986	382	78·5	1,116
Saltley	25,565	1,198	21·3	973
Sandwell	18,118	1,538	11·8	1,138
Selly Oak	24,705	1,250	19·8	1,095
Small Heath	28,873	686	42·1	1,067
Soho	26,053	714	36·5	1,173
Sparkbrook	34,803	657	53·0	1,090
Sparkhill	21,277	2,636	8·1	1,170
Washwood Heath	31,559	1,319	23·9	1,018
Yardley	15,462	2,786	5·5	1,066
Whole City	850,947	43,537	19·5	1,098

* The inmates of institutions are excluded from the Ward Populations.

In a modern garden suburb the number of houses per acre is usually limited to 12, which at five persons per house will give 60 persons per acre. Judged by this standard, no Ward in the City appears to be seriously overcrowded if the number of dwelling houses alone per acre be taken into consideration. This, however, is usually a defective method of estimating the density of population per acre. Many of our areas, as is well known, are really densely crowded with people, because the space allowed for dwellings is only a small part of the whole, the remainder being occupied by factories and similar buildings.

At the recent Census there were 177,030 buildings used as dwellings, with 180,509 separate occupiers. In addition there were 12,892 uninhabited dwellings, and 682 in course of construction.

If institutions, blocks of flats, shops, etc., are deducted, there remain 159,796 ordinary dwellings, such as cottages, villas, etc. These were occupied by 162,719 separate occupiers, and contained a population of 745,076. This gives an average for the ordinary dwellings of 4·7 persons per house.

At the Census, the population was found to be distributed as follows:—

(*a*) In cottages and villas	745,076	840,202
(*b*) In flats	883	
(*c*) In shops	62,717	
(*d*) In hotels and public-houses	8,310	
(*e*) In warehouses, workshops, etc.	2,715	
(*f*) In institutions	19,001	
(*g*) In other buildings	1,133	
(*h*) In vessels, and vagrants	367	

Taking all inhabited buildings in Birmingham at the Census, the number of persons per building was 4·75. In other large towns the figures were:—

PERSONS PER INHABITED BUILDING.

Birmingham	4·75	Bradford	4·08
Liverpool	5·57	Hull	4·57
Manchester	4·86	Newcastle	8·13
Sheffield	4·65	Nottingham	4·38
Leeds	4·37	Stoke-on-Trent	5·06
Bristol	5·30	Salford	4·99
West Ham	6·52	Portsmouth	5·13
Leicester	4·46		

Each year a valuable return is obtained from the City Rates Department of the number of inhabited and uninhabited houses in each municipal ward in the City, the definition of an inhabited house being somewhat different for rates purposes to that for Census purposes.

Thus, on March 31st, 1911, it was found from the Rates Books that there were in the old City area 113,112 occupied houses. At the same time the Census enumerators ascertained 109,689 inhabited buildings, occupied by 111,818 separate occupiers. At first sight there seems to be a discrepancy of about 3 per cent. in these two figures, but the explanation of the difference is that at the Census houses which had no inmates in them on the Census night, although occupied in the ordinary sense, are counted as uninhabited.

Perhaps void houses or dwellings uninhabited are of more importance to a sanitary authority than inhabited buildings, as these represent the excess of house room available.

At the 1911 Census there were in Greater Birmingham 12,892 uninhabited dwellings, that is, dwellings in which no one passed the night of the Census, of which 11,267 were cottages or villas, etc., 1 was a flat, 1,530 were shops, 11 were hotels and public-houses, 61 were offices, workshops, etc., 13 were institutions, and 9 were other buildings. A considerable number of these would be only temporarily uninhabited, the occupants being away from home on the night of the Census. Taking all uninhabited dwellings (12,892), and allowing 4·75 persons per dwelling, the City then had accommodation for 61,237 additional persons, or 7·3 per cent. of the total population.

On a similar basis, and using the figures shown in the table above, the other large towns had accommodation for the following additions to their Census population in the uninhabited dwellings:—

ACCOMMODATION IN UNINHABITED DWELLINGS.

	No. of Persons.	Percentage of Total Population.
Birmingham	61,237	7·3
Liverpool	60,802	8·1
Manchester	48,581	6·8
Sheffield	27,467	6·0
Leeds	39,365	8·8
Bristol	29,320	8·2
West Ham	15,081	5·2
Bradford	14,557	5·0
Hull	17,284	6·2
Newcastle	18,366	6·9
Nottingham	11,331	4·4
Stoke	11,056	4·7
Salford	12,984	5·6
Portsmouth	8,654	3·7
Leicester	10,945	4·8

It has not yet been possible to obtain exact figures for house accommodation in the Wards of the City from the Census office. From the local rates office the following has been ascertained for March 31st, 1912:—

OCCUPIED AND VOID HOUSES IN WARDS.

WARD.	Estimated Population.*	Persons per House.	Occupied Houses.	Void Houses.	Percentage of Void Houses.
Acock's Green	25,204	4·24	5,954	248	4·0
All Saints'	41,745	4·67	8,941	615	6·4
Aston	40,851	4·72	8,663	366	4·1
Balsall Heath	39,158	4·37	8,961	413	4·4
Duddeston and Nechells ...	41,023	4·76	8,616	664	7·2
Edgbaston	33,253	5·10	6,512	493	7·0
Erdington (North)	14,925	4·28	3,485	62	1·7
Erdington (South)	16,254	4·48	3,631	111	3·0
Handsworth	25,756	4·28	6,021	239	3·8
Harborne	14,875	4·20	3,544	186	5·0
King's Norton	20,637	4·62	4,471	85	1·9
Ladywood	29,061	4·65	6,244	438	6·6
Lozells	33,982	4·41	7,705	304	3·8
Market Hall	17,330	4·73	3,663	298	7·5
Moseley and King's Heath ...	24,998	4·34	5,754	291	4·8
Northfield	7,313	4·33	1,688	65	3·7
Rotton Park	38,959	4·59	8,495	407	4·6
St. Bartholomew's	36,987	5·04	7,338	780	9·6
St. Martin's and Deritend ...	39,347	4·62	8,521	919	9·7
St. Mary's	32,111	4·96	6,475	692	9·7
St. Paul's	29,986	4·64	6,461	512	7·3
Saltley	25,565	4·57	5,589	156	2·7
Sandwell	18,118	4·33	4,186	116	2·7
Selly Oak	24,705	4·65	5,314	243	4·4
Small Heath	28,873	4·42	6,525	101	1·5
Soho	26,053	4·38	5,943	251	4·1
Sparkbrook	34,803	4·49	7,757	290	3·6
Sparkhill	21,277	4·40	4,835	90	1·8
Washwood Heath	31,559	4·67	6,753	174	2·5
Yardley	15,462	4·64	3,332	146	4·2
Whole City	850,947	4·69	181,377	9,755	5·1

* The inmates of Institutions are excluded from the Ward populations.

These figures show the very important fact that there are plenty of houses void in the central areas, while there are very few void in the outskirts, and from local knowledge it is possible to assert that the back-to-back courtyard house still continues to be difficult to let, while the house in the suburbs with decent surroundings is run after by tenants who struggle for possession.

Not only are these houses in the centre unlettable, but they are practically unsaleable, mainly because there is no demand for them by tenants. The practical result is (as shown in the figures under the heading "Housing of the Working Classes") that owners are allowing these houses to deteriorate to such an extent that they are rapidly coming within the scope of the Housing Acts and are being demolished. There has been now for more than ten years a clearance of these small courtyard houses at an ever-increasing rate.

MARRIAGES.

The number of marriages recorded in the City during 1912 was 6,317, equal to a rate of 14·9 per 1,000 of the population.

BIRTHS.

The births registered during the year numbered 22,168, of which 11,300 were those of males and 10,868 those of females. This figure does not include any still-births, which are not required to be registered, although they have to be notified under the Notification of Births Act. The children born alive represent a birth-rate of 26·1 per 1,000. The birth-rates in the area which is now comprised within the City have been calculated back to the year 1901, and are shown below, together with those for England and Wales during the same period and for the old City in quinquennial periods from 1871 to 1900.

Birth-Rate per 1,000.

	Birmingham.			England and Wales.		
1871-1875 (Old City)		Average	40·4		Average	35·5
1876-1880 ,,		,,	41·0		,,	35·3
1881-1885 ,,		,,	36·1		,,	33·5
1886-1890 ,,		,,	32·9		,,	31·4
1891-1895 ,,		,,	32·7		,,	30·5
1896-1900 ,,		,,	33·3		,,	29·3
1901 (Extended City)	31·4			28·5		
1902 ,,	31·2			28·5		
1903 ,,	30·9	,,	30·7	28·5	,,	28·2
1904 ,,	31·0			28·0		
1905 ,,	29·0			27·3		
1906 ,,	29·4			27·2		
1907 ,,	28·8			26·5		
1908 ,,	29·1	,,	28·3	26·7	,,	26·3
1909 ,,	27·4			25·8		
1910 ,,	26·8			25·1		
1911 ,,	26·1			24·4		
1912 ,,	26·1			23·8		

These figures show how striking has been the decline in the birth-rate both in Birmingham and in the country as a whole.

The next statement shows the birth-rates in some of the largest English towns :—

Birth-Rates in Large Towns.

London	24·5 per 1,000.	Bradford	19·4 per 1,000
Birmingham	26·1 ,,	Hull	27·7 ,,
Liverpool	29·5 ,,	Newcastle	26·8 ,,
Manchester	25·1 ,,	Nottingham	23·6 ,,
Sheffield	27·7 ,,	Stoke	31·2 ,,
Leeds	23·2 ,,	Portsmouth	23·6 ,,
Bristol	21·4 ,,	Salford	26·8 ,,
West Ham	29·6 ,,	Leicester	22·6 ,,

To some extent the differences shown in the birth-rate in different towns is due to the varying age and sex constitution of their population. Differences in social conditions also affect the birth-rate in a marked degree.

The same two factors no doubt affect also the birth-rates in the different municipal Wards, which were as follows :—

Birth-Rates in Wards.

North-West Division	District A.	St. Mary's	33·6	Average 31·3
		St. Paul's	30·6	
		All Saints'	29·7	
	District B.	Soho	22·2	21·3
		Lozells	23·0	
		Handsworth	18·9	
		Sandwell	21·0	

				Average
North-East Division	District A.	St. Bartholomew's	33·4	32·4
		Duddeston and Nechells	36·0	
		Saltley	27·7	
	District B.	Aston	30·5	26·0
		Washwood Heath	29·4	
		Erdington (North)	22·7	
		Erdington (South)	21·6	
South-East Division.	District A.	St. Martin's and Deritend	32·1	26·9
		Balsall Heath	23·3	
		Sparkbrook	25·3	
	District B.	Small Heath	23·6	22·8
		Yardley	23·2	
		Acock's Green	25·1	
		Sparkhill	19·2	
South-West Division	District A.	Market Hall	24·7	24·5
		Ladywood	28·1	
		Rotton Park	28·9	
		Edgbaston	17·0	
		Harborne	23·9	
	District B.	Selly Oak	27·1	22·1
		Moseley and King's Heath	17·8	
		King's Norton	23·1	
		Northfield	20·6	

The birth-rates varied from 17·0 in Edgbaston, 17·8 in Moseley and King's Heath, and 18·9 in Handsworth to 36·0 in Duddeston and Nechells, 33·6 in St. Mary's, and 33·4 in St. Bartholomew's. The Wards are arranged in this table according to the Divisions and Districts into which the City is divided for the purpose of Public Health Administration. In each instance District A represents the more central and District B the more outlying portion of the division. It is very significant that in every case the central area has an average birth-rate much higher than the outlying portion, the difference in some cases being almost 50 per cent.

Of the 22,168 births 673 are shown in the Birth Registers as illegitimate, equal to 3·0 per cent.

NOTIFICATION OF BIRTHS ACT, 1907.

Under this Act there were 22,313 births notified immediately after birth during 1912, of which 667 were still-births, equal to 3·0 per cent. of the total.

The Health Visitors visited 13,686 babies, or 63 per cent. of the total number notified.

Of the 22,168 registered during the year 21,528 had been duly notified under the provisions of the Act, leaving 640 which ought to have been notified and were not. This is equal to 2·9 per cent. of the total number. Great care is taken to ascertain whether every birth which appears on the Registrar's Return has been duly notified, and whenever this has not been done a circular is sent to the parents calling attention to the necessity of complying with the Act. Although the Act has now been in force for five years, there are still a certain number of people unaware of its provisions. Briefly, the Act requires that every birth shall be notified within 36 hours to the Medical Officer of Health. To facilitate this, printed forms are supplied to all doctors and midwives who are requested to give one to the parents at every birth they attend. The form has then merely to be posted with the name, address, and date filled in.

DEATHS.

The deaths of 12,005 persons belonging to Birmingham were recorded during the year. Of these 6,187 were those of males and 5,818 those of females. The deaths were equal to a rate of 14·1 per 1,000. This rate compares with those of previous years as follows. The Birmingham figures from 1901 to 1912 apply to the area now embraced within the City boundary; the averages for earlier years to the old City.

DEATH-RATE PER 1,000.

	Birmingham.		England and Wales.	
1871-1875	(Old City) ...	Average 25·2 ...		Average 22·0
1876-1880	,, ...	,, 22·8 ...		,, 20·8
1881-1885	,, ...	,, 20·7 ...		,, 19·4
1886-1890	,, ...	,, 20·2 ...		,, 18·9
1891-1895	,, ...	,, 20·3 ...		,, 18·7
1896-1900	,, ...	,, 20·5 ...		,, 17·7
1901	(Extended City) 17·5	,, 16·5 ...	16·9	,, 16·0
1902	,, 16·3		16·3	
1903	,, 15·8		15·5	
1904	,, 17·7		16·3	
1905	,, 15·1		15·3	
1906	,, 15·9	,, 15·0 ...	15·5	,, 14·7
1907	,, 15·3		15·1	
1908	,, 15·3		14·8	
1909	,, 15·1		14·6	
1910	,, 13·2		13·5	
1911	,, 15·0		14·6	
1912	,, 14·1		13·3	

The death-rate for 1912 was the lowest with one exception in our records.

In the next table will be found the death-rates in certain other large towns:—

DEATH-RATES IN LARGE TOWNS.

London...	13·6 per 1,000.	Bradford	14·5 per 1,000
Birmingham	14·1 ,,	Hull	14·4 ,,
Liverpool	17·7 ,,	Newcastle	15·7 ,,
Manchester	16·2 ,,	Nottingham	14·4 ,,
Sheffield	14·3 ,,	Stoke	15·9 ,,
Leeds	14·3 ,,	Portsmouth	12·9 ,,
Bristol	13·6 ,,	Salford	17·2 ,,
West Ham	14·2 ,,	Leicester	13·6 ,,

It will be seen that Birmingham holds a good position among the sixteen towns mentioned in this list, eleven of which show a higher and four a lower rate than this City.

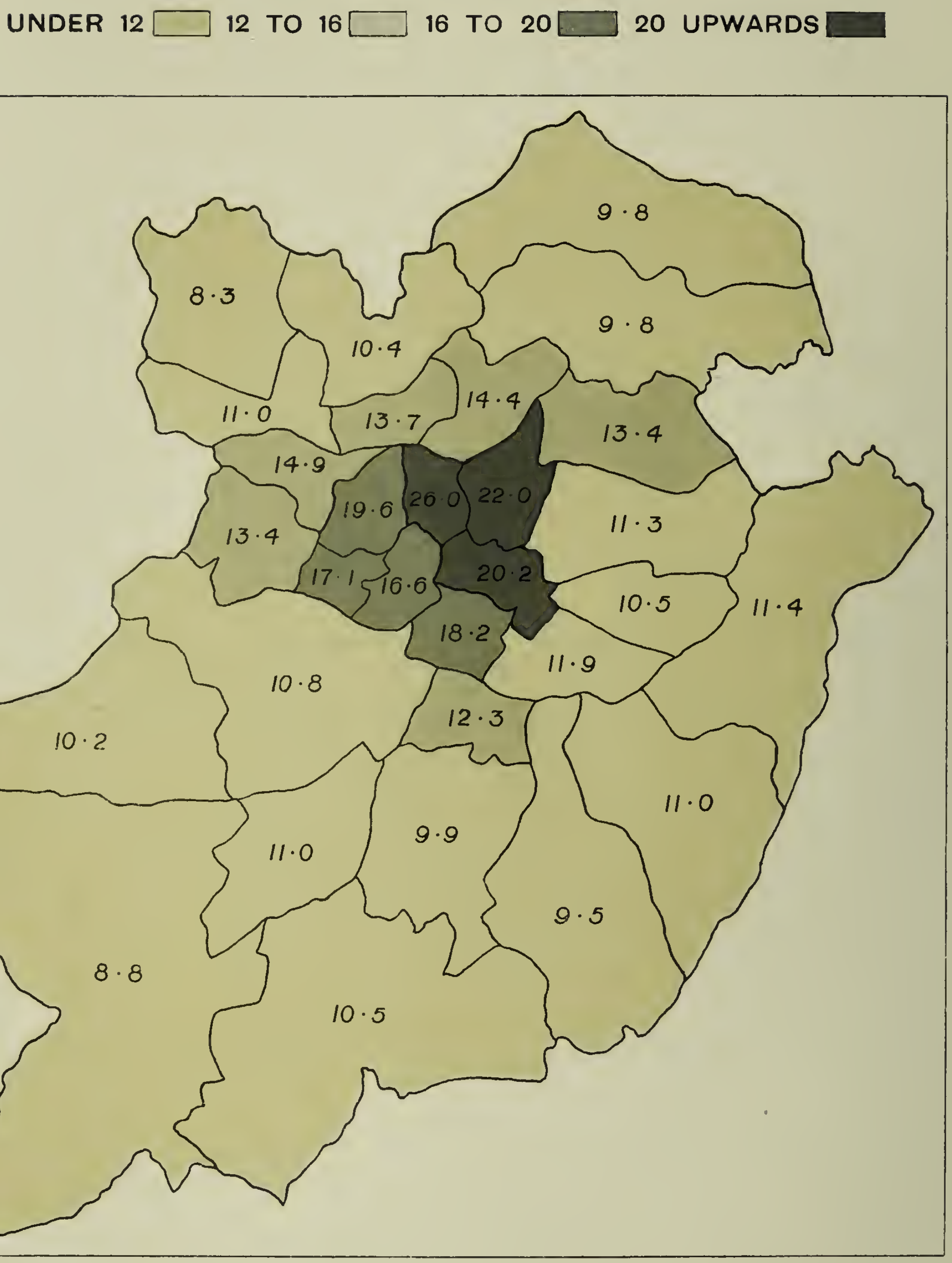
Although the total death-rate for the City is on the whole a satisfactory one, there are many of the municipal Wards in which the mortality is excessive. This is shown in the following table:—

DEATH-RATES IN WARDS.

NORTH-WEST DIVISION	District A.	St. Mary's	26·0	Average 20.2
		St. Paul's	19·6	
		All Saints'	14·9	
	District B.	Soho	11·0	10·8
		Lozells	13·7	
		Handsworth	10·4	
		Sandwell	8·3	
NORTH-EAST DIVISION	District A.	St. Bartholomew's	20·2	17·8
		Duddeston and Nechells ...	22·0	
		Saltley	11·3	
	District B.	Aston	14·4	11·8
		Washwood Heath	13·4	
		Erdington (North)	9·8	
		Erdington (South)	9·8	

CHART No. 1.

DEATH-RATES IN WARDS.



WARDS.

SANDWELL	8·3	YARDLEY	11·4
NORTHFIELD	8·8	SPARKBROOK	11·9
SPARKHILL	9·5	BALSALL HEATH	12·3
ERDINGTON, NORTH	9·8	ROTTON PARK	13·4
ERDINGTON, SOUTH	9·8	WASHWOOD HEATH	13·4
MOSELEY AND KING'S HEATH	9·9	LOZELLS	13·7
HARBORNE	10·2	ASTON	14·4
HANDSWORTH	10·4	ALL SAINTS'	14·9
KING'S NORTON	10·5	MARKET HALL	16·6
SMALL HEATH	10·5	LADYWOOD	17·1
EDGBASTON	10·8	ST. MARTIN'S AND DERITEND	18·2
ACOCK'S GREEN	11·0	ST. PAUL'S	19·6
SELLY OAK	11·0	ST. BARTHOLOMEW'S	20·2
SOHO	11·0	DUDDESTON AND NECHELLS	22·0
SALTLEY	11·3	ST. MARY'S	26·0

South-East Division	District A.	St. Martin's and Deritend ...	18·2	Average 14·1
		Balsall Heath	12·3	
		Sparkbrook	11·9	
	District B.	Small Heath	10·5	10·6
		Yardley	11·4	
		Acock's Green	11·0	
		Sparkhill	9·5	
South-West Division	District A.	Market Hall	16·6	13·6
		Ladywood	17·1	
		Rotton Park	13·4	
		Edgbaston	10·8	
		Harborne	10·2	
	District B.	Selly Oak	11·0	10·0
		Moseley and King's Heath ...	9·9	
		King's Norton	10·5	
		Northfield	8·8	

It cannot be considered at all satisfactory that while the death-rate for the whole City is 14·1, that of St. Mary's Ward is 26·0, Duddeston and Nechells, 22·0, St. Bartholomew's, 20·2, St. Paul's, 19·6, and St. Martin's and Deritend, 18·2.

In the chart on the opposite page the Wards with the highest death-rates are coloured dark grey, those with lower rates being indicated by a lighter colour. It will be seen that there are three Wards adjoining each other in which the death-rates are over 20 per 1,000, four others in which the rates are between 16 and 20 per 1,000, six others in which they fall between 12 and 16 per 1,000, and seventeen, with a total population of 378,000, in which the rates are below 12 per 1,000, falling in the case of Northfield Ward to the low figure of 8·8 per 1,000. It will be noted at once that the low rates are all in the outlying Wards, and the high figures in the central area. The list at the foot of the chart, in which the Wards appear in the order of their death-rates, can conveniently be used as a key to the names of the Wards.

In order to throw some light on the wide differences in mortality in the four groups of Wards, the deaths in them have been analysed and the death-rates calculated from some of the more prominent causes of death.

The groups of Wards are as follows:—

Group 1.	Death-rates	over 20 per 1,000.	Total population	110,121
Group 2.	,,	between 16 and 20.	,,	115,724
Group 3.	,,	between 12 and 16.	,,	226,254
Group 4.	,,	under 12 per 1,000.	,,	378,071

The death-rates in these four groups have been as follows:—

DEATH-RATES IN GROUPS OF WARDS.

	Group 1.	Group 2.	Group 3.	Group 4.
Tubercular Diseases	2·42	2·37	1·51	1·00
Cancer	·90	1·14	·88	·92
Heart Diseases	1·05	·94	1·19	·95
Bronchitis	2·46	1·79	1·14	·80
Pneumonia	2·39	1·54	1·18	·75
Diarrhœa and Enteritis ...	·91	·62	·38	·21
Nephritis and Bright's Disease	·37	·48	·33	·38
Premature Birth and Debility...	2·08	1·67	1·17	·83

These figures are very suggestive. They show that the death-rate from Tubercular Diseases is more than twice as high in the bad Wards as in the good ones. Bronchitis also is three times as high; Pneumonia three times as high; Diarrhœa four times as high; and Prematurity and Infantile Debility more than twice as high. There can be little doubt that all these causes of death belong to the "preventable" class; in regard to most of them we know quite well how to reduce the mortality to a minimum. On the other hand, Cancer, of the origin of which we know little, is just as common a cause of death in the good as in the bad Wards. The same may be said of Diseases of the Heart, and of Nephritis and Bright's Disease. The conclusion, therefore, stands out clearly that the excessive mortality in the unhealthy Wards is due to causes which must be regarded as preventable, and not to those whose prevention is at present beyond our knowledge.

INFANTILE MORTALITY.

The deaths of infants under one year numbered 2,471, equal to a rate of 111 per 1,000 births. The rates in previous years and in England and Wales are shown below. The rates for the present area of the City have been calculated for the years 1901-12; the averages for earlier years relate to the old City.

INFANTILE MORTALITY RATE.

Birmingham.			England and Wales.	
1871-1875 (Old City) ...		Average 182		Average 153
1876-1880 ,, ...		,, 164		,, 145
1881-1885 ,, ...		,, 161		,, 139
1886-1890 ,, ...		,, 173		,, 145
1891-1895 ,, ...		,, 176		,, 151
1896-1900 ,, ...		,, 199		,, 156
1901 (Extended City)	176		151	
1902 ,,	144		133	
1903 ,,	147	,, 157	132	,, 138
1904 ,,	179		145	
1905 ,,	141		128	
1906 ,,	157		132	
1907 ,,	133		118	
1908 ,,	130	,, 131	120	,, 117
1909 ,,	121		109	
1910 ,,	115		105	
1911 ,,	150		130	
1912 ,,	111		95	

The summer of the year 1911 was abnormally hot and dry. As a consequence, the infantile mortality, both in Birmingham and in England and Wales, rose to a comparatively high figure, although even then it was much below the rates recorded in earlier years. Last year the weather conditions were favourable to a low infantile mortality, and the actual figure was the lowest ever yet recorded.

Looking at the table there can be little doubt that a real and substantial fall in infantile mortality is now in progress. This is eminently satisfactory in view of the increased attention paid to this subject, and should be an incentive to further efforts.

The next table shows the infantile mortality rate in Birmingham and in other large towns:—

INFANTILE MORTALITY IN LARGE TOWNS.

London...	91 per 1,000.	Bradford	99 per 1,000.
Birmingham	111 ,,	Hull	101 ,,
Liverpool	125 ,,	Newcastle	101 ,,
Manchester	122 ,,	Nottingham	118 ,,
Sheffield	107 ,,	Stoke	127 ,,
Leeds	102 ,,	Portsmouth	83 ,,
Bristol	103 ,,	Salford	130 ,,
West Ham	102 ,,	Leicester	109 ,,

Birmingham's position is not altogether satisfactory in this table, there being only five towns with higher rates.

In the table below will be found particulars of the infantile mortality at different weeks and months of the first year of life and from each of the more important causes of death. Particulars as to the distribution of the mortality over the different Wards are given in Table IV. in the appendix.

INFANTILE MORTALITY DURING THE YEAR 1912.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.	WEEKS.				Total under One Month.	MONTHS.				Total Deaths under One Year.
	0-1	1-2	2-3	3-4		1-3	3-6	6-9	9-12	
Small Pox	—	—	—	—	—	—	—	—	—	—
Chicken Pox	—	—	—	—	—	—	1	2	—	3
Measles	—	—	—	—	—	3	4	26	59	92
Scarlet Fever	—	—	—	—	—	—	—	3	2	5
Diphtheria and Croup... ...	—	—	—	—	—	—	—	—	2	2
Whooping Cough	—	—	2	1	3	16	37	49	50	155
Diarrhœa	—	—	3	2	5	15	22	11	11	64
Enteritis	—	4	4	5	13	29	49	24	19	134
Tuberculous Meningitis ...	—	—	—	—	—	—	6	5	8	19
Abdominal Tuberculosis ...	—	—	—	—	—	5	4	4	2	15
Other Tuberculous Diseases ...	—	—	—	—	—	1	5	8	5	19
Congenital Malformations ...	28	12	10	4	54	15	4	4	1	78
Premature Birth	333	54	41	21	449	35	3	4	—	491
Atrophy, Debility & Marasmus	93	32	31	22	178	90	77	40	16	401
Atelectasis	33	5	5	1	44	2	—	—	—	46
Injury at Birth...	19	1	2	—	22	—	—	—	—	22
Erysipelas	—	—	2	1	3	1	2	1	—	7
Syphilis	5	2	4	2	13	21	3	1	—	38
Rickets	—	—	—	—	—	—	—	2	2	4
Meningitis (not Tuberculous)...	—	—	—	—	—	6	17	18	11	52
Convulsions	19	9	14	2	44	29	23	24	10	130
Gastritis	—	2	3	3	8	19	15	8	2	52
Laryngitis	—	—	—	—	—	—	—	—	1	1
Bronchitis	2	7	11	6	26	49	36	38	28	177
Pneumonia (all forms) ...	1	1	1	4	7	40	56	71	74	248
Suffocation (overlaying) ...	6	3	5	4	18	42	27	1	1	89
Other causes	22	13	6	6	47	19	17	26	17	126
All causes	561	145	144	84	934	437	408	370	321	2470

Out of the 2,470 deaths under one year of age no less than 561, about one-fourth, occurred in the first week of life. These deaths were almost all due to some condition existing at the time of birth and not to any unsuitable environment afterwards. Thus 333 were definitely stated as due to prematurity, 28 to malformations, 93 to congenital debility, and 33 to atelectasis. To prevent this large portion of the infantile mortality, therefore, it is necessary to look to the mother before and at the time of confinement.

The total number of infant deaths set down to Prematurity was 491, and to Malformation 78, making a total of 569. From Debility and Marasmus there were 401 deaths. They were divided among the various ages as follows:—

	Prematurity and Malformation.	Debility and Marasmus.
Under 1 week	361	93
1 and under 2 weeks	66	32
2 and under 3 weeks	51	31
3 and under 4 weeks	25	22
1 and under 3 months	50	90
3 and under 6 months	7	77
6 and under 9 months	8	40
9 and under 12 months	1	16

The following statement shows the infantile mortality in the different Wards :—

INFANTILE MORTALITY IN WARDS.

Division	District	Ward	Rate	Average
NORTH-WEST DIVISION.	District A.	St. Mary's	194	142
		St. Paul's	134	
		All Saints'	98	
	District B.	Soho	76	86
		Lozells	102	
		Handsworth	78	
		Sandwell	87	
NORTH-EAST DIVISION.	District A.	St. Bartholomew's	134	141
		Duddeston and Nechells	180	
		Saltley	109	
	District B.	Aston	105	90
		Washwood Heath	97	
		Erdington North	62	
		Erdington South	97	
SOUTH-EAST DIVISION.	District A.	St. Martin's and Deritend	136	102
		Balsall Heath	81	
		Sparkbrook	90	
	District B.	Small Heath	85	83
		Yardley	109	
		Acock's Green	79	
		Sparkhill	61	
SOUTH-WEST DIVISION.	District A.	Market Hall	138	109
		Ladywood	123	
		Rotton Park	112	
		Edgbaston	87	
		Harborne	87	
	District B.	Selly Oak	57	68
		Moseley and King's Heath	74	
		King's Norton	80	
		Northfield	60	

Great variations are to be seen, as was the case with the total death-rate, in the infantile mortality in the different Wards. On the whole the northern portion of the City suffers from the higher infantile mortality ; but what is far more striking and important is that in every division the more central portion (District A) has an enormously higher rate than the more outlying portion (District B).

In order to throw more light on the differences in the Ward mortalities, the Wards have been divided into the same four groups as were taken in regard to the total death-rate, group 1 having the worst general death-rate, and group 4 the best. Treated in this way the infantile mortality rate from various causes is as follows :—

	Group 1.	Group 2.	Group 3.	Group 4.
All causes	169	132	100	82
Measles and Whooping Cough	18·7	12·0	11·1	6·3
Diarrhœa and Enteritis	16·6	14·0	7·2	4·7
Tuberculous Diseases	2·9	2·9	1·9	2·2
Congenital Defects	1·3	3·8	3·4	4·6
Premature Birth	26·9	23·6	20·9	19·8
Atrophy, Debility, Marasmus	28·7	24·5	16·5	10·6
Convulsions	8·7	5·5	5·3	5·1
Bronchitis and Pneumonia	31·1	22·5	17·8	13·7
Suffocation	11·6	5·0	2·7	1·3

The mortality from Premature Birth was almost as great in the good Wards as in the bad, and if Congenital Defects be added, as they probably should be, the difference between the Wards is still less. It would seem from this that the adverse conditions which cause a high general mortality do not produce an excess of premature births. But with all the other causes of death the mortality decreases regularly as you pass from the bad to the good group of Wards.

Thus Measles and Whooping Cough caused three times as many deaths in the bad as in the good Wards. It cannot be ascertained, owing to the absence of notification of cases, whether this higher mortality results from a greater prevalence in the bad Wards or whether it is due to the loss of a large number of lives which with better nursing and healthier surroundings would have been saved.

Similarly Diarrhœa and Enteritis caused between three and four times as many deaths in the bad as in the good Wards, Debility and Wasting about three times as many, and Bronchitis and Pneumonia between two and three times as many.

The figures relating to Suffocation show how great a waste of human life occurs in some parts of the town from this cause.

The following is Dr. MacCallum's report on the special work done in connection with the reduction of the high infantile mortality in certain selected areas:—

PUBLIC HEALTH DEPARTMENT,
February, 1913.

SIR,

I beg to submit a report on the special work done in the prevention of infant mortality in the three areas, St. George's and St. Stephen's, Duddeston and Nechells, and St. Martin's and Deritend. The work was commenced in Duddeston and Nechells and St. Martin's and Deritend Wards in the beginning of June, 1912, and has been carried on since, on much the same lines as that done in the St. George's and St. Stephen's area during the last four years.

There are four special Infant Visitors for these areas, and the children born are visited about the end of the first week of life by the Visitor for the area. At this visit information is obtained regarding the mother's employment, previous history, etc., and advice is given as to the care and feeding of the child. Frequently it has been found at these visits that a mother is just beginning to give up the breast-feeding of a feeble child because it is not strong enough to suck or that the child does not stimulate the breast to secrete sufficient milk. The breast pump has been used in these cases, and an older child put back to the breast, the breast completely emptied, the secretion of milk so increased and artificial feeding avoided in many cases.

If a medical man is in attendance at the birth of a child, the Visitor pays her first visit when his attendance has ceased. Visits are paid by the Infant Visitors weekly for the first month, and then monthly till the end of the first year. In cases that require medical advice the mother is urged to bring the child to the Infant Consultations.

Poor families are brought into touch with the various charitable agencies in the City. If artificial feeding of the infant is necessary, the Visitors demonstrate to the mother the method of preparation of the food and the superiority of the boat-shaped feeding bottle over the long-tubed bottle.

I visit in the forenoons the infants that are reported to me by the Infant Visitors as unhealthy or as being improperly fed.

"Infant Consultations" are held weekly in each of the areas. The babies are weighed and examined each time they are brought. Notes are taken as to their general condition and progress. Each mother receives a card on which the baby's weekly weight is charted. The mothers are advised as to the care and feeding of their infants, and the importance of breast-feeding is emphasised. Breast-feeding is carefully regulated, in all cases a "test-feed" is given, and the amount of milk an infant is getting determined. If it is found that the child is getting too much milk, the intervals between feeding are lengthened, or the duration of each feed diminished. Breast-fed infants who get too much milk will sooner or later suffer from digestive disorders. If, as often happens, it is found the infant is getting an insufficient quantity, the mother is instructed to give additonal feeds of cow's milk after each breast-feed to make up the deficiency. Advice is also given to the mothers regarding the care of their own health.

In St. Martin's and Deritend Ward, an area in which the diarrhœal death-rate is high, the use of dried milk is being tried for the artificially-fed infants suffering from gastric and intestinal disorders. Such infants are predisposed to attacks of epidemic diarrhœa. It is hoped to correct these disorders by feeding the infants on dried milk, which is said to be more digestible and more easily kept free from contamination in poor homes than fresh cow's milk. We endeavour to bring back these infants on to fresh cow's milk as soon as their symptoms of indigestion subside. The mothers are meanwhile taught how to prevent such disorders recurring by the proper modification and care of fresh cow's milk. The dried milk is sold to the mothers at the Infant Consultations at cost price.

The following tables give certain statistics relating to the work in these special areas during 1912 :—

		St. Martin's and Deritend area (June to Dec.)	Duddeston and Nechells area (June to Dec.)	St. George's and St. Stephen's area (Jan. to Dec.)	Total.
Total number of births		749	829	1365	2943
Births attended by Doctor		92 (13 %)	92 (11 %)	241 (17 %)	425 (14 %)
Births attended by Doctor and Midwife		8	26	31	65
Births attended by Midwife only ...		583	681	979	2243
Births in Institutions		23	19	89	131
Illegitimate Births per 1,000		19	18	20	19
Excluded from subsequent visiting	Stillbirths	20	24	46	90
	Better class houses ...	37	9	17	63
	Wrong addresses ...	6	2	8	16
	Dead at 1st visit ...	27	37	38	102
Mother employed before confinement ...		294	271	594	1159
Mother not employed		412	547	746	1705
Premature Births among former, per 1,000		27	66	52	49
Premature Births among latter, per 1,000		24	25	26	25
Mothers who have attended Infant Consultations...		287	194	546	1027
Total number of attendances		999	568	1966	3533

CHILDREN BORN IN 1911 IN ST. GEORGE'S AND ST. STEPHEN'S AREA AND KEPT UNDER OBSERVATION.

The following are the statistics obtained in regard to children born during the year 1911, and who at the end of 1912 had been kept under observation for a whole year or till the time of their death.

The total number of children born alive in St. George's and St. Stephen's area in the year 1911 was 1,398, while 41 still-births were registered. Of these 1,398 children 39 were excluded because they were children in better class houses, 204 children were lost sight of during the year, due to removal from the district, while 13 others were never found. This leaves 1,142 infants who were kept under observation, and of these 219 died giving an infant mortality rate of 191 per 1,000 births. This figure is higher than the figures of the two preceding years, due to the severe epidemic of summer diarrhœa in 1911.

Enquiry has been made as in preceding years into the effect of the industrial employment on the part of the mother upon the health of the infant. 1,132 mothers with 1,142 children are dealt with. It appears that of 1,132 mothers 626 were industrially employed before or after confinement, either in a factory or elsewhere, while 506 were not so employed.

The mortality among their infants is shown in the table below:—

INFANT MORTALITY AND EMPLOYMENT OF MOTHER.

	Births.	Deaths.	Infant Mortality per 1,000.
Mother employed in a factory	432	84	194
Employed at home or elsewhere... ...	199	37	186
Total employed	631	121	191
Not employed	511	98	192
Grand Total	1142	219	191

The mortality amongst the children of employed women was 191 per 1,000 births, and amongst those of unemployed women it was 192 per 1,000 births.

The following table shows the health of the surviving infants at the age of 12 months:—

HEALTH OF INFANT AND EMPLOYMENT OF MOTHER.

	In Good Health.	In Fair Condition.	In Poor Health.
Mother employed in factory...	64 %	28 %	8 %
Employed at home or elsewhere	71 %	20 %	9 %
Total employed	66 %	25 %	9 %
Not employed	69 %	24 %	7 %
Grand Total	67 %	25 %	8 %

The mothers who were employed in a factory had 64 % of their children in good health, whilst those who were employed at home had 71 %. The mothers who were employed had a larger number of children in fair or poor health than the mothers who were not employed. Of the 1,132 mothers 592, or 52 %, were employed during pregnancy, and 540, or 48 %, were not so employed. Of the 1,132 mothers 308 were industrially employed after their confinement and during the life of the baby. This is equal to 27 % of the total number of mothers. The number of mothers employed during pregnancy was almost twice as great as the number employed afterwards.

The 1,132 mothers had had 3,797 children born alive prior to the year 1911. Certain particulars regarding their previous confinements are given below:—

PREVIOUS CONFINEMENTS OF THE SAME MOTHERS.

	Employed before or after recent Confinement.			Not Employed.	Total.
	In Factory.	At Home or Elsewhere.	Total Employed.		
Total number of mothers	430	196	626	506	1132
Children born alive per 100 mothers ...	183	467	272	406	332
Children now living per 100 mothers ...	131	320	193	292	236
Died in 1st year per 1,000 born	300	260	278	251	263
Miscarriages and stillbirths per 100 mothers	24	65	37	48	41
No previous confinements per 100 mothers	31	11	22	9	17

It will be seen that the women who were not employed had larger families than the women who were employed.

The following table shows the Infant Mortality rate amongst the babies previously born to the women who had a baby in 1911 :—

INFANT MORTALITY RATE PER 1,000 AMONG BABIES BORN PREVIOUSLY.

Mothers employed in a factory	300
Employed at home and elsewhere	260
Employed industrially	278
Not employed industrially	251
Grand Total	263

These figures apply to 3,797 children born previously to women who had a baby in 1911. It will be seen that the mortality was highest among the children of the women who worked in a factory.

The question of the age of the mother in relation to the infant mortality rate is interesting :—

MORTALITY OF CHILDREN ACCORDING TO MOTHER'S AGE.

	Under 25 years.			25-35 years.			35 and over.		
	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.
Industrially employed	648	119	183	1020	167	163	422	77	182
Not ,,	260	52	200	913	154	168	440	74	168
Total ...	908	171	188	1933	321	166	862	151	175

These figures apply to all children born during the years 1909, 1910, and 1911. The highest mortality was amongst the children of the mothers under 25 years of age, and amongst those the death-rate was higher when the mother was not industrially employed. Of the women under 25 years 71 % were industrially employed, against 53 % of those aged 25 to 35 years, and 48 % of those aged 35 years or more.

Poverty has a marked influence on infant mortality. The following table shows this fact :—

INFANT MORTALITY AND WAGES OF FATHER.

	Father out of work or earning less than £1 per week.	Father earning £1 per week or over.
	Infant Mortality.	Infant Mortality.
	1911.	1911.
Mother employed in a factory	212	172
Employed at home or elsewhere... ...	244	155
Total employed	223	167
Not employed	251	169
Total	232	168

The infant mortality rate amongst the children of poor families is much greater than amongst those who are better off—being 232 in the former and 168 in the latter, an excess of 64 per 1,000.

INFANT MORTALITY RATE AND POVERTY IN RELATION TO METHODS OF FEEDING.

	Father out of work or earning less than £1 per week.	Father earning £1 per week or more.	ALL CASES.
Baby fed at breast	142	87	105
Fed by hand (partly or entirely)	275	218	213
Total	192	127	160

(Babies who died without taking any food at all are excluded both as births and deaths.)

The mortality amongst breast-fed children in poor families was 55 per 1,000 in excess of the mortality amongst children in better off families. The mortality amongst breast-fed children is much lower than the mortality amongst those fed by hand whether in poor or in better off families. Amongst artificially fed children the rate was 275 in the poorer homes, and 218 in the better homes, an excess of 57 per 1,000.

The next table shows the influence of poverty on the health of the children who survived at the end of one year :—

HEALTH OF SURVIVORS AND WAGES OF FATHERS.

	Father's wages less than £1.			Father's wages £1 or more.		
	Good.	Fair.	Puny.	Good.	Fair.	Puny.
Mother employed in factory ...	56 %	34 %	10 %	72 %	23 %	5 %
Employed at home or elsewhere	68 %	20 %	12 %	75 %	20 %	5 %
Total employed	59 %	30 %	11 %	73 %	22 %	5 %
Not employed	60 %	30 %	10 %	70 %	25 %	5 %
Total	60 %	30 %	10 %	71 %	24 %	5 %

In the homes where the father earned £1 per week or more the percentage of children in good health at the end of the year was 11 % higher than the percentage in the homes where the father earned less than £1 per week. Both in the poorer and the better off families the mother who was employed in a factory had a larger percentage of children in poor health than the mother who was employed at home or at charing, etc.

The next table shows the influence of poverty and the method of feeding upon the health of the children who survived the first year of life :—

POVERTY AND HEALTH OF BABIES.

	Father's wages less than £1.			Father's wages £1 or more.		
	Good.	Fair.	Puny.	Good.	Fair.	Puny.
Breast-fed	66 %	27 %	7 %	74 %	21 %	5 %
Partly artificial	46 %	36 %	18 %	66 %	27 %	7 %
Entirely artificial	52 %	33 %	15 %	62 %	33 %	5 %
Total	60 %	29 %	11 %	71 %	24 %	5 %

Of breast-fed children in the better homes 74 % were in good health, whereas in the poorer homes only 66 % were in good health.

INFANT MORTALITY AND RENTAL OF HOUSES. MORTALITY RATE PER 1,000.

	Rent under 5/- per week.	Rent 5/- per week and over.
Employed	195	173
Not employed	205	150
Total	199	160

The infant mortality rate was greater in the houses under 5/– than in those of 5/– per week and upwards. In the houses under 5/– the infant mortality rate was greater amongst the women not employed, whereas in the houses 5/– per week and over the infant mortality rate was greater amongst the women who were employed industrially.

HOW THE BABIES WERE FED.

The percentage of non-working women who breast-fed their children till they were six months was 85%, an increase of 6% on last year's figures. Where the mother worked in a factory the percentage who breast-fed their children decreased from 94% in the first month to 45% in the second month. This large decrease was not observed in those women employed at home or at charing, etc.; amongst them the figures were 90% in the first month and 80% in the second. Only 10% of the women employed in a factory breast-fed their children at six months old, whereas 68% of the women employed at home did so feed them. 74% of the women who worked in a factory were able to partly feed their children at the breast at six months old.

The total number of babies weighed at the age of twelve months was 285, a much smaller number than in previous years. Those who had been classed as good weighed on an average 19lbs., those classed as fair 16½lbs., and those classed as unsatisfactory 14 lbs.

EFFECT OF INDUSTRIAL EMPLOYMENT AND WAGES OF FATHERS ON WEIGHT OF CHILDREN.

	Father out of Work or earning less than £1.	Father earning £1 or more
Mother employed in a factory	18 1/16	19
Employed at home or elsewhere	18⅞	19⅜
Employed	18⅜	19⅛
Not employed	18¾	18½

Yours obediently,
A. B. MACCALLUM, M.B., CH.B.

INFECTIOUS DISEASES.

The deaths during the year are shown in the table below :—

DISEASE.	Deaths in 1912.	Average 1902-11.	Above or below the average.
Enteric Fever	30	61	–31
Smallpox	0	2	–2
Measles	571	289	+282
Scarlet Fever	153	134	+19
Whooping Cough	331	289	+42
Diphtheria	100	148	–48
Diarrhœa and Enteritis	346	910	–564
Erysipelas	23	29	–6
Pulmonary Tuberculosis	1,088	977	+111
Other Forms of Tuberculosis	204	304	–100

It will be seen that Measles, Scarlet Fever and Whooping Cough all caused a higher mortality than usual. Pulmonary Tuberculosis also caused a larger number of deaths, while "other forms of Tuberculosis" showed a decrease about equal to the increase in Pulmonary Tuberculosis.

The relative prevalence of the principal notifiable diseases is shown in the next table:—

Disease.	Cases in 1912.	Average 1902-11.	Above or below the average.
Enteric Fever	102	323	–221
Smallpox	0	47	–47
Scarlet Fever	5,505	3,925	+1,580
Diphtheria	807	1,135	–328
Erysipelas	753	816	–63
Pulmonary Tuberculosis	4,394	—	—
Puerperal Fever	78	47	+31
Ophthalmia Neonatorum	220	—	—

In addition to the above, the following cases were reported by the elementary school teachers:—

Measles	7,693
German Measles	1,088
Whooping Cough	3,687
Chicken Pox	2,689
Mumps	1,157

These cases represent only a portion of the total number, being those which come to the knowledge of the teachers. Naturally there are a large number among children and others who are not of school age of which no record is available. The visiting of the large number of cases stated above, however, takes up a very considerable part of the time of the Health Visitors.

ENTERIC FEVER.

The cases and deaths from Enteric Fever have been as follows:—

	Cases.		Deaths.		Death-rate for England and Wales.
	No.	Rate.	No.	Rate.	
1901	842	1·11	133	·18	·15
1902	718	·92	133	·17	·13
1903	517	·67	81	·10	·10
1904	350	·45	59	·08	·09
1905	292	·37	51	·06	·09
1906	286	·36	55	·07	·09
1907	360	·45	76	·09	·07
1908	261	·32	61	·07	·07
1909	179	·22	33	·04	·06
1910	122	·15	31	·04	·05
1911	148	·18	35	·04	·07
1912	102	·12	30	·04	·04

There are few things in our statistical records more striking than the decrease in Enteric Fever.

In the whole of England and Wales the sickness rate for Enteric Fever was ·23, as compared with ·12 in Birmingham. The highest rates recorded in county boroughs were ·89 in Bradford, ·82 in Wigan, ·66 in Devonport, while the lowest were ·06 in Oxford and in Smethwick, ·05 in Bournemouth and in Wolverhampton, and nil in Eastbourne. Of the 75 county boroughs only 10 show a better sickness rate for this disease than Birmingham.

Every case of the disease was carefully enquired into with a view to ascertaining if possible the source of infection. It is generally impossible to be quite certain as to which of several apparent causes was the one actually causing the disease in any particular case. With this reservation in view it may be said that during 1912 the causes of the disease in Birmingham were somewhat as follows:—

Cases probably due to infected mussels	33
,, ,, ,, to imported infection	4
,, ,, ,, to local infection	10
,, with no apparent cause	55

During the year under review inquiry was received from several towns as to the extent of the Enteric Fever due to mussels, so that it is certain that the Birmingham experience is not unique in this respect. It appears, therefore, to be intolerable that a large population like that of Birmingham should be unable to adequately protect itself from this imported infection, which recurs annually whenever the sale of mussels commences. Obviously the proper method is to prevent the exportation of infected shell fish from the well-known sewage-infected beds. The Public Health and Housing Committee issued the following poster during the year :—

CITY OF BIRMINGHAM.

MUSSELS

AND

TYPHOID FEVER.

YOU ARE WARNED AGAINST THE
DANGER OF EATING

UNCOOKED MUSSELS.

To prevent Typhoid Fever
MUSSELS SHOULD BE WELL BOILED.

By Order of the Public Health Committee.

The Council House,
December, 1912.

JOHN ROBERTSON,
Medical Officer of Health.

It may be well to mention that the most vigilant inspection cannot differentiate mussels which come from sewage-polluted beds from those from areas free from sewage contamination. The local wholesale dealers in mussels deserve a great deal of credit for the trouble they have gone to in trying to obtain their supplies from good sources. In each case before they accept a consignment they ask for a certificate to show that the source is a clean one. Such a system, while it is some protection, is not of much value. During the past year one source from which mussels were received with certificates attached was found to be really a very contaminated one.

For several years past representations have been made to the Local Government Board to protect communities by some general action among authorities controlling mussel layings. Pending such general action the evidence of harm done in Birmingham by mussels is so great every year that it would appear to be necessary to warn the public against eating mussels under any circumstances.

The University examined 91 samples of blood for Widal reaction, against 86 in the previous year.

In addition to the 102 cases referred to above, there were 14 other cases notified, which afterwards proved not to be Typhoid Fever.

SMALLPOX.

No case of this disease was reported during 1912. In view of the fact that the accommodation for dealing with Smallpox is very inadequate at the present time, it may be desirable to set out clearly the incidence of the disease in Birmingham in past years, and for the whole of England during 1912. The cases and deaths in Birmingham have been as follows:—

Smallpox Cases and Deaths.

	Cases Notified.	Deaths Registered.		Cases Notified.	Deaths Registered.
1872	1,977	299	1893	979	70
1873	794	122	1894	2,074	171
1874	3,791	637	1895	100	8
1875	824	173	1896	14	4
1876	11	0	1897	0	0
1877	50	8	1898	0	0
1878	27	5	1899	0	0
1879	4	0	1900	2	0
1880	18	2	1901*	1	0
1881	16	6	1902	91	4
1882	89	17	1903	325	14
1883	1,202	110	1904	15	0
1884	471	64	1905	41	1
1885	84	12	1906	1	0
1886	2	0	1907	0	0
1887	12	2	1908	0	0
1888	18	0	1909	0	0
1889	0	0	1910	0	0
1890	0	0	1911	1	1
1891	47	7	1912	0	0
1892	27	0			

* Since 1901 the figures apply to the City as now constituted.

It will be seen from the above that since 1894, *i.e.*, eighteen years ago, Birmingham has had very little Smallpox, but that prior to that year there were at intervals of nine or ten years severe outbreaks in which several thousands were attacked, and in some instances several hundreds of deaths occurred, as in the 1874 outbreak. The protection which vaccination confers on a community is relatively a small one nowadays, partly because every year the number of persons who escape vaccination increases, and partly because the regulations as to vaccination by medical men are so defective as to allow almost anything in the way of an operation to be considered sufficient to enable the medical man to certify that a child has been vaccinated.

Fortunately, Birmingham is to a large extent protected by its position from the imported infection which causes so many outbreaks to take place in other towns; but this is by no means an absolute protection. Every year there are received in the Public Health Department here a large number of notifications—sometimes amounting to hundreds—from Port Sanitary Authorities of the fact that persons have disembarked from ships on which Smallpox has occurred, and have come on to Birmingham.

During the year there were 111 cases of Small Pox notified in England and Wales in 34 sanitary districts and 12 others notified to Port Sanitary Authorities, the largest outbreak being 60 cases at Bristol. Most of these cases were either imported from abroad, or the infection was contracted from an imported case. During the whole year there was remarkably little spread of the disease in the country.

At the present time the Public Health Committee in Birmingham are considering the question of making efficient provision for the treatment and isolation of Smallpox. The situation of the present Smallpox Hospital is excellent, and the building is a good one, but it was designed for a town with a population of 80,000, and has no contact houses in connection with it. This small institution will require to be considerably enlarged, and to have provided the very essential adjunct of proper contact accommodation.

VACCINATION.

The following statement shows the amount of vaccination performed in regard to infants whose births were registered during the year ending June 30th, 1912 :—

Births returned	21,881		
Conscientious objections	1,877, or	8·6 %	of total.
Died unvaccinated	2,357		
Successfully vaccinated	15,075, or	77·2 %	of survivors.
Insusceptible	78, or	0·4 %	,,
Postponed by medical certificate	442, or	2·3 %	,,
Removed to other districts	379, or	1·9 %	,,
Lost sight of	1,340, or	6·9 %	,,
Still under notice	333, or	1·7 %	,,

MEASLES.

There were 571 deaths reported as due to Measles during 1912. The epidemic was probably the most virulent and rapid spreading which has occurred in recent years, the mortality being ·67 per 1,000.

From the table following it will be gathered that the disease was unusually fatal in St. Mary's and Duddeston and Nechells Wards, the death-rate in St. Mary's being 2·68 per 1,000 of the population, while in Duddeston and Nechells it was 2·50 per 1,000. This table also shows that the Wards in the northern half of the City suffered very much more severely than those in the southern half. In a single year this may probably be due in part to the epidemic not having expended itself, districts which were free in one year being sometimes severely attacked after the end of the year. If the records of a series of years are examined, however, it is found that the suburban wards escape with a very light mortality from Measles, while in the central wards the death-rate is very high.

Measles Death-Rates in Wards in 1912.

				Average
North-West Division.	District A.	St. Mary's	2·68	1·65
		St. Paul's	1·33	
		All Saints'	0·93	
	District B.	Soho	0·65	0·36
		Lozells	0·53	
		Handsworth	0·27	
		Sandwell	—	
North-East Division.	District A.	St. Bartholomew's	1·60	1·51
		Duddeston and Nechells	2·50	
		Saltley	0·43	
	District B.	Aston	0·78	0·53
		Washwood Heath	1·01	
		Erdington North	0·20	
		Erdington South	0·12	
South-East Division.	District A.	St. Martin's and Deritend	0·51	0·34
		Balsall Heath	0·28	
		Sparkbrook	0·23	
	District B.	Small Heath	0·07	0·09
		Yardley	0·26	
		Acock's Green	0·04	
		Sparkhill	—	
South-West Division.	District A.	Market Hall	0·69	0·44
		Ladywood	0·69	
		Rotton Park	0·41	
		Edgbaston	0·12	
		Harborne	0·27	
	District B.	Selly Oak	0·36	0·09
		Moseley and King's Heath	—	
		King's Norton	—	
		Northfield	—	

No record is available of the actual number of cases of the disease which occurred, but the elementary school teachers reported 7,693 cases of Measles and 1,088 of German Measles. It is probable that this number was greatly exceeded, as the number ascertained by school teachers would be a relatively small one.

Owing to the alteration of boundaries it is difficult to compare the death-rate with those for previous years. The figures, however, for the past twelve years have been ascertained, and only once during that period has the mortality rate been exceeded, viz., in 1909, when it was ·82 per 1,000. The majority of the deaths occurred under three years of age, as is shown in the following table:—

Deaths from Measles.

Under 1 year	92
1 and under 2 years	195
2 ,, 3 ,, ...	124
3 ,, 4 ,, ...	62
4 ,, 5 ,, ...	43
5 ,, 10 ,, ...	53
Over 10 years	2

Of the 571 deaths 8 occurred in the first quarter of the year, 28 in the second quarter, 81 in the third quarter, and 454 in the fourth quarter. The mortality, therefore, in the fourth quarter was at the rate of 2·12 per 1,000. During the same quarter at Newcastle-on-Tyne the death-rate was 2·37 per 1,000, at Stockton-on-Tees it was 2·38 per 1,000, at Middlesbrough it was 2·48, at Preston 3·00, at West Ham 3·05, and at West Hartlepool it was 3·63 per 1,000.

The disease is one which it is very difficult to control; indeed it is doubtful whether it can be prevented. It is calculated that over 95 per cent. of the total population suffer from Measles at one time or other in their lives. While this is so, however, the mortality is to a large extent under control, and it is mainly in this direction that the efforts of the Health Visitors were directed, with a view to advising that children who were suffering from the disease should be kept in bed and kept warm during the acute period of the illness. Every known case was visited, and in the areas chiefly affected in the poorer districts house to house visitation was made with a view to cautioning people as to what should be done in case Measles occurred.

Largely to draw the attention of parents to the acuteness of the epidemic, at the request of the Public Health and Housing Committee all the infants' departments of the public elementary schools in the City were closed from December 13th until after the Christmas holidays. The mortality from Measles for the six weeks before and after this school closure is set out below:—

Before Closure.		After Closure.	
Nov. 9	39 deaths.	Week ending Dec. 21 ...	46 deaths.
,, 16	46 ,,	,, ,, 28 ...	46 ,,
,, 23	47 ,,	,, Jan. 4 ...	40 ,,
,, 30	45 ,,	,, ,, 11 ...	30 ,,
Dec. 7	46 ,,	,, ,, 18 ...	28 ,,
,, 14	51 ,,	,, ,, 25 ...	21 ,,

SCARLET FEVER.

During last year 5,505 cases of Scarlet Fever were reported, as compared with 3,925 per annum during the preceding ten years. The number of notified cases and deaths are shown on the next page for each year since 1901:—

SCARLET FEVER CASES AND DEATHS.

	Cases.		Deaths.		Death-rate for England and Wales.
	No.	Rate.	No.	Rate.	
1901	4,309	5·68	178	·23	·13
1902	6,617	8·52	337	·43	·15
1903	4,246	5·48	196	·25	·12
1904	2,648	3·38	84	·11	·11
1905	2,372	3·00	66	·08	·11
1906	2,803	3·51	72	·09	·10
1907	3,854	4·77	119	·15	·09
1908	4,004	4·85	122	·15	·08
1909	4,797	5·82	147	·18	·09
1910	4,324	5·20	118	·14	·07
1911	3,587	4·27	82	·10	·05
1912	5,505	6·49	153	·18	·05

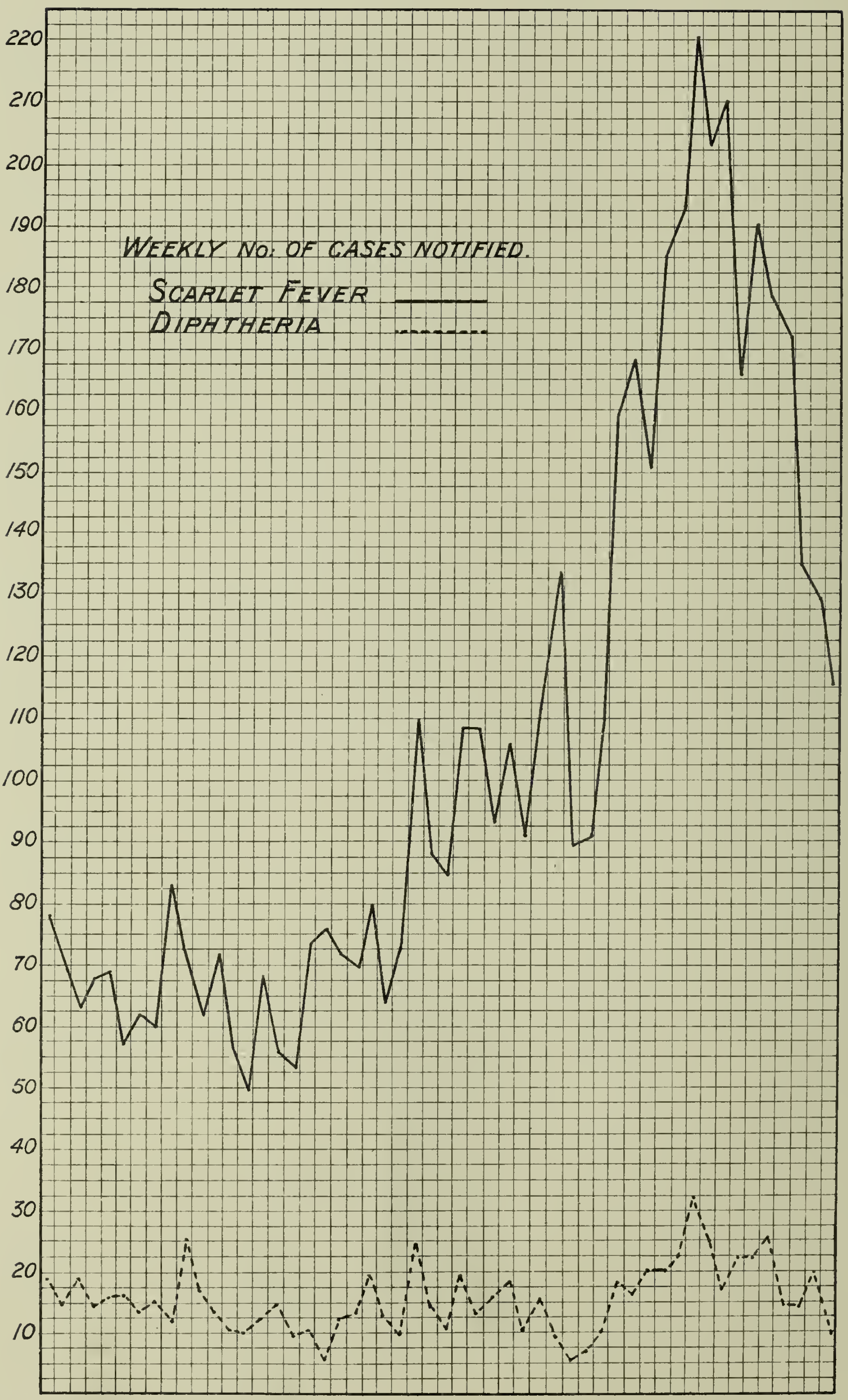
The mortality rate from Scarlet Fever was ·18 per 1,000, as compared with a mortality of ·43 per 1,000 in 1902, when Scarlet Fever was epidemic, so that it may be said that the disease which occurred in 1912 was relatively of a mild type. During the past ten years Scarlet Fever, while always present, has never occurred in what might be considered widely epidemic form, although there has been an increased prevalence in the autumn of each year.

The distribution of cases over the Wards was as follows :—

SCARLET FEVER SICKNESS RATES.

				Average
NORTH-WEST DIVISION.	District A.	St. Mary's	10·6	9·8
		St. Paul's	9·4	
		All Saints'	9·5	
	District B.	Soho	4·8	6·7
		Lozells	9·2	
		Handsworth	6·0	
		Sandwell	6·7	
NORTH-EAST DIVISION.	District A.	St. Bartholomew's	6·8	6·4
		Duddeston and Nechells	4·6	
		Saltley	7·9	
	District B.	Aston	8·6	6·2
		Washwood Heath	8·8	
		Erdington North	3·2	
		Erdington South	4·3	
SOUTH-EAST DIVISION.	District A.	St. Martin's	5·4	5·1
		Balsall Heath	5·2	
		Sparkbrook	4·6	
	District B.	Small Heath	9·9	6·6
		Yardley	5·0	
		Acock's Green	6·1	
		Sparkhill	5·3	
SOUTH-WEST DIVISION.	District A.	Market Hall	6·4	5·1
		Ladywood	7·4	
		Rotton Park	6·0	
		Edgbaston	3·2	
		Harborne	2·5	
	District B.	Selly Oak	1·9	3·2
		Moseley and King's Heath	2·7	
		King's Norton	5·6	
		Northfield	2·7	

CHART No. 2.


WEEKLY No. OF CASES NOTIFIED.
SCARLET FEVER
DIPHTHERIA
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10

From the above it will be seen that the district which most largely escaped was that comprising the Wards of Selly Oak, Moseley, King's Norton, and Northfield, while the rest of the City had an incidence rate very much the same, except in St. Mary's, St. Paul's, and All Saints', where the disease was about 50 per cent. more prevalent than in any other district.

The chart opposite shows the number of cases reported each week, both of Scarlet Fever and Diphtheria.

The age distribution of the disease was as follows :—

SCARLET FEVER CASES AND DEATHS.

	Cases Notified.	Deaths Registered.	Proportion of Deaths to Cases, %.
Under 1 year	33	5	15·2
1 to 2 years	115	14	12·2
2 to 3 „	316	31	9·8
3 to 4 „	442	24	5·4
4 to 5 „	566	23	4·1
5 to 10 „	2,523	44	1·7
10 to 15 „	1,016	5	0·5
Over 15 „	494	7	1·4
All ages	5,505	153	2·8

This table shows how much more fatal Scarlet Fever is in the case of children under five years of age than in children over that age. Of the 153 deaths nearly two-thirds were amongst children under five years of age, although only about a quarter of the total cases occurred at that age period.

The cases of true Scarlet Fever admitted to the various City Hospitals numbered 3,897, the case mortality being 3·1 per cent., while the cases treated at home numbered 1,608, with a case mortality of 1·9 per cent.

Of the total number of patients admitted to hospital supposed to be suffering from Scarlet Fever about 10 per cent. were found to be erroneously diagnosed.

The people of Birmingham avail themselves of hospital isolation for Scarlet Fever to a greater extent than is necessary; indeed during the year under review when it has been difficult to find accommodation for all the cases, some amount of grumbling has taken place because children who could be more safely and quite efficiently isolated at home were not removed to hospital.

In a considerable number of cases treated in hospital, as well as a smaller number of those treated at home, a "return case" followed after the patient was released from isolation.

"A case of Scarlet Fever arising in a house, within 28 days of the return from hospital, or the release from isolation of a previous case of this disease," is the definition adhered to in compiling the following figures relating to "return cases."

It is found that the great majority of "return cases" are caused by discharges from the nose, ears, or throat of previous patients, and that it is extremely rare for these discharges to occur and apparently prove infectious after periods of more than four weeks. Further, as the so-called infective period of the convalescent patient is prolonged, so errors are easily introduced in judging of the probable source of infection.

All cases are excluded from the figures in which the diagnosis of Scarlet Fever in the "infecting case" or the "return case" was revised, or returned as doubtful.

The number of return cases for the year 1912 was 304, following upon the release of 248 infecting cases and involving 234 houses.

The following are the figures for the previous years :—

Year.	Cases Notified.	Return Cases.	Infecting Cases.
1907	2,522	52	35
1908	2,275	105	75
1909	2,871	114	101
1910	2,709	133	120
1911	2,258	142	110
1912*	5,505	304	248

* Enlarged City.

The 304 return cases were made up as follows :—

	Return Cases.	Infecting Cases.	Houses Involved.
Little Bromwich Hospital	184	150	142
Lodge Road Hospital	83	63	61
West Heath Hospital	11	13	11
Witton Hospital	5	7	6
Cases treated at home	21	15	14
Total	304	248	234

Of the 3,897 cases of Scarlet Fever admitted to the City hospitals, in which the diagnosis was confirmed by the course of the disease, there were 283 return cases, giving a percentage of 7·2.

1,608 cases of this disease were treated at home during the year, and an analysis of these shows that there were 21 return and 15 infecting cases, giving percentages of 1·3 and ·9 respectively.

The cases are grouped below according to the number of days which elapsed between the return from hospital or release from isolation at home of the primary case and the onset of illness of the " return case " :—

After an Interval of	No. of Cases.	After an Interval of	No. of Cases.
1 day	0	15 days	10
2 days	4	16 ,,	10
3 ,,	11	17 ,,	9
4 ,,	26	18 ,,	7
5 ,,	23	19 ,,	5
6 ,,	22	20 ,,	9
7 ,,	25	21 ,,	6
8 ,,	16	22 ,,	3
9 ,,	20	23 ,,	3
10 ,,	12	24 ,,	2
11 ,,	18	25 ,,	3
12 ,,	22	26 ,,	1
13 ,,	14	27 ,,	2
14 ,,	14	28 ,,	7

The following table shows the conditions present in the infecting cases after return from hospital when they were visited by the Assistant Medical Officer :—

No abnormal condition	73 cases.	Tonsillitis	7 cases.
Nasal discharge	138 ,,	Adenitis ...	22 ,,
Sore nostrils	36 ,,	Abscesses	10 ,,
Otorrhœa	15 ,,	Nephritis	3 ,,
Cracked ears	3 ,,	Other complications	6 ,,
Sores of body, etc.	13 .,		

The following are the complications from which the "infecting cases" suffered in hospital, as reported by the Medical Superintendents:—

No complications ...	108 cases.	Conjunctivitis	6 cases.
Nasal discharge ...	86 ,,	Abscesses	23 ,,
Sore nostrils	19 ,,	Nephritis	6 ..
Otorrhœa	45 ,,	Albuminuria	18 ,,
Cracked ears, etc. ...	2 ,,	Rheumatism	5 ,,
Sores of body, etc. ...	10 ,,	Vulvitis	4 ,,
Tonsillitis	18 ,,	Other complications ...	7 ,,
Adenitis...	17 ,,		

With a view to ascertaining whether any local outbreak of Scarlet Fever is occurring, a special chart is kept for each school in the city, showing the number of cases of Scarlet Fever and Diphtheria which occur in the various classes of the school, and this chart is entered up day by day, so that at any period it is possible to see what part a particular school or class appears to be taking in the spread of Scarlet Fever. Several instances occurred in which the school showed some slight incidence in particular departments or in classes which undoubtedly played a part in the spread of the disease, but the outstanding feature during the past year, as in previous years, is the fact that the schools have not played any important part in the propagation of Scarlet Fever in Birmingham.

A card index is also kept with cross references to indicate the number of cases of Scarlet Fever connected with each milk supply, so that on the occurrence of several cases rapidly one after the other at the houses supplied by any vendor it is possible to notice the fact at once. During the year under review it might be said that the milk supplies of Birmingham did not play any part in the spreading of Scarlet Fever. The great outstanding fact which emphasises itself year by year is that Scarlet Fever is a disease which is spread from one person to another, and probably from people who act as carriers without themselves suffering.

On the occurrence of a case of Scarlet Fever a careful investigation is made by the Inspector and the Assistant Medical Officer of Health for the district into the whole circumstances, and in the majority of instances it is found that no direct clue is available as to the source of infection. The popular idea as to the nature and method of spread of Scarlet Fever is to a considerable extent fallacious. Experience shows that among a large majority of the children of Birmingham who have never had Scarlet Fever it would be at any one time extremely difficult to spread it. The degree of natural immunity to the disease varies enormously in different children, but it is the rule rather than the exception for a case of the disease in the back-to-back cottage houses in the City not to be followed by a subsequent case in that or one of the adjoining houses, notwithstanding the fact that intimate contact has taken place.

WHOOPING COUGH.

The deaths from Whooping Cough numbered 331. This is 42 above the average in the preceding ten years. The figures for previous years are given below:—

Mortality from Whooping Cough.

	Deaths in Birmingham.		Death-rate in England and Wales.
	Number.	Rate.	
1901	299 ...	·39 ...	·31
1902	363 ...	·47 ...	·30
1903	127 ...	·16 ...	·29
1904	585 ...	·75 ...	·35
1905	206 ...	·26 ...	·26
1906	350 ...	·44 ...	·24
1907	244 ...	·30 ...	·30
1908	406 ...	·49 ...	·28
1909	188 ...	·23 ...	·20
1910	283 ...	·34 ...	·25
1911	139 ...	·17 ...	·21
1912	331 ...	·39 ...	·23

The mortality from Whooping Cough varies greatly from quarter to quarter. Last year the deaths in the four quarters numbered 184, 107, 26 and 14 respectively. The ages at death were as follows :—

Under 1 year	155 deaths.
Between 1 and 2 years	109 ,,
,, 2 ,, 3 ,,	33 ,,
,, 3 ,, 4 ,,	16 ,,
,, 4 ,, 5 ,,	12 ,,
Over 5 years	6 ,,

The teachers in public elementary schools reported 3,687 cases, each of which was visited by one of the Health Visitors with a view to leaving instructions as to what should be done to prevent serious complications. As in the case of all other infectious diseases, the school teacher was notified when the nature of the disease was ascertained, and was asked to keep the affected child away until the whooping ceased.

DIPHTHERIA.

Fewer cases of this disease occurred during 1912 than in any year since 1901, and the sickness rate (·95 per 1,000) has seldom been lower. The total number of cases notified was 807, with 100 deaths. The following table shows the number of cases and deaths in each year since 1901 :—

Diphtheria Cases and Deaths.

	Cases.		Deaths.		Death-rate for England and Wales
	No.	Rate.	No.	Rate.	
1901	789	1·04	119	·16	·27
1902	1,118	1·44	180	·23	·24
1903	1,176	1·52	172	·22	·18
1904	902	1·15	161	·21	·17
1905	972	1·23	132	·17	·16
1906	1,165	1·46	134	·17	·18
1907	1,459	1·81	154	·19	·16
1908	1,229	1·49	162	·20	·16
1909	1,136	1·38	163	·20	·15
1910	1,063	1·28	109	·13	·12
1911	1,134	1·35	111	·13	·13
1912	807	·95	100	·12	·11

Since 1905 the case mortality has been a relatively low one, varying from 10 to 13 per cent.

In England and Wales the sickness rate was 1·24 per 1,000, as compared with ·95 in Birmingham. The highest rates were 4·57 in Croydon, 4·48 in Portsmouth, and 3·82 in Canterbury, while the rate was as low as ·12 in Dudley, ·19 in Oxford, and ·22 in West Bromwich and Bury.

In the next table is shown the distribution of cases of the disease in the various Wards per 1,000 of the population, and it will be noted that in many of the poorest areas in the centre of the City the incidence of the disease was considerably less than in the better class artisan districts in the suburbs. Taking the areas of St. Mary's, St. Paul's, All Saints', St. Bartholomew's, Duddeston and Nechells, and Saltley, the average sickness rate per 1,000 of the population was ·60, while the case mortality in the area was 17 per cent. of the cases. On the other hand in the Wards of Yardley, Acock's Green, Sparkhill, Moseley and

King's Heath, Selly Oak, King's Norton, and Northfield, the average incidence of the disease was 1·34 per 1,000 of the population, and the case mortality was 9 per cent. Thus the sickness rates recorded in the poor class Wards was much smaller than in the better class areas, while the case mortality was very much larger. The figures seem to raise the question whether in the poorer districts a large number of cases pass unnoticed which would be recognised and notified in a better class Ward.

SICKNESS RATES FROM DIPHTHERIA.

				Average
NORTH-WEST DIVISION.	District A.	St. Mary's	·56	·73
		St. Paul's	·77	
		All Saints'	·86	
	District B.	Soho	·69	1·13
		Lozells	·97	
		Handsworth	1·59	
		Sandwell	1·27	
NORTH-EAST DIVISION.	District A.	St. Bartholomew's	·57	·48
		Duddeston and Nechells	·39	
		Saltley	·47	
	District B.	Aston	·37	·77
		Washwood Heath	·86	
		Erdington North	·94	
		Erdington South	·92	
SOUTH-EAST DIVISION.	District A.	St. Martin's and Deritend	·86	·77
		Balsall Heath	·84	
		Sparkbrook	·60	
	District B.	Small Heath	·94	1·26
		Yardley	·97	
		Acock's Green	1·71	
		Sparkhill	1·41	
SOUTH-WEST DIVISION.	District A.	Market Hall	·75	1·13
		Ladywood	1·00	
		Rotton Park	·74	
		Edgbaston	·87	
		Harborne	2·29	
	District B.	Selly Oak	1·34	1·31
		Moseley and King's Heath	1·16	
		King's Norton	1·94	
		Northfield	·82	

The total number of cases removed to the City Hospitals was 352. The fatality rate amongst the cases treated in these hospitals was 12·5 per cent., as compared with 12·3 per cent. in cases treated at home or in some other institution. It must be remembered that many of the cases treated at the City Hospitals were removed there because of the severity of the attack, while in many of those treated at home the disease was of so mild a character as to require little or no treatment.

During the year 2,791 swabs were examined by the Pathology Department of the University, and of these 761 proved to show the presence of the Diphtheria bacillus, while in 2,030 cases this organism was absent.

Anti-toxin is supplied at the expense of the Public Health and Housing Committee, in boxes containing 4,000 units each, to medical men who make application for it. In addition to the Pathological Department of the University, the following Police Stations keep a supply for distribution :—

Bristol Road, Northfield,
Redditch Road, Kings Norton,
High Street, Selly Oak,
Pershore Road, Stirchley,
High Street, King's Heath,
Stratford Road, Sparkhill,
Coventry Road, Hay Mills,
Wilton Street, Erdington,
Victoria Road, Aston,
Holyhead Road, Handsworth.

The total amount of anti-toxin given out was 497 doses, 363 from the University and 134 from the Police Stations.

DIARRHŒA AND ENTERITIS.

The year 1912 was unfavourable from a meteorological standpoint to the prevalence of Summer Diarrhœa. The summer indeed was conspicuous for the lack of sunshine and the excess of rain. In consequence the diarrhœal mortality was exceptionally small. The figures are as follows :—

	Deaths from Diarrhœa and Enteritis.	Death-rate per 1,000	Maximum Air Temperature	Days with 75° or over.*	Maximum Soil Temperature (4ft. deep).*	Amount of Rain.*
1901	1,320	1·74	88·0	17	56·0	5·91
1902	634	·82	81·4	4	53·9	7·51
1903	921	1·19	83·8	4	53·8	9·85
1904	1,422	1·82	81·8	16	55·8	5·75
1905	839	1·06	80·3	7	55·4	7·33
1906	1,439	1·80	90·6	15	56·2	2·97
1907	511	·63	76·8	1	53·2	6·08
1908	873	1·06	82·0	7	54·2	6·94
1909	535	·65	84·4	9	54·3	7·63
1910	541	·65	73·9	0	53·2	8·24
1911	1,390	1·65	93·9	40	57·2	3·27
1912	346	·41	82·2	4	53·9	10·99

*In the third quarter of the year.

These figures show that last year was one of the coolest and wettest in our records. It was in striking contrast to 1911, which was exceptionally hot, and which had a diarrhoeal mortality four times as great as 1912. It should be borne in mind, however, that the excessive heat produces its fatal effects principally as the result of bad sanitary and social conditions and as these are being gradually improved, the outbreaks of fatal diarrhœa are becoming less formidable. This is plainly seen in the table, the summer of 1911 being quite unprecedentedly hot, and yet producing a smaller diarrhœal death-rate than either 1904, 1906, or 1901.

TUBERCULOSIS.

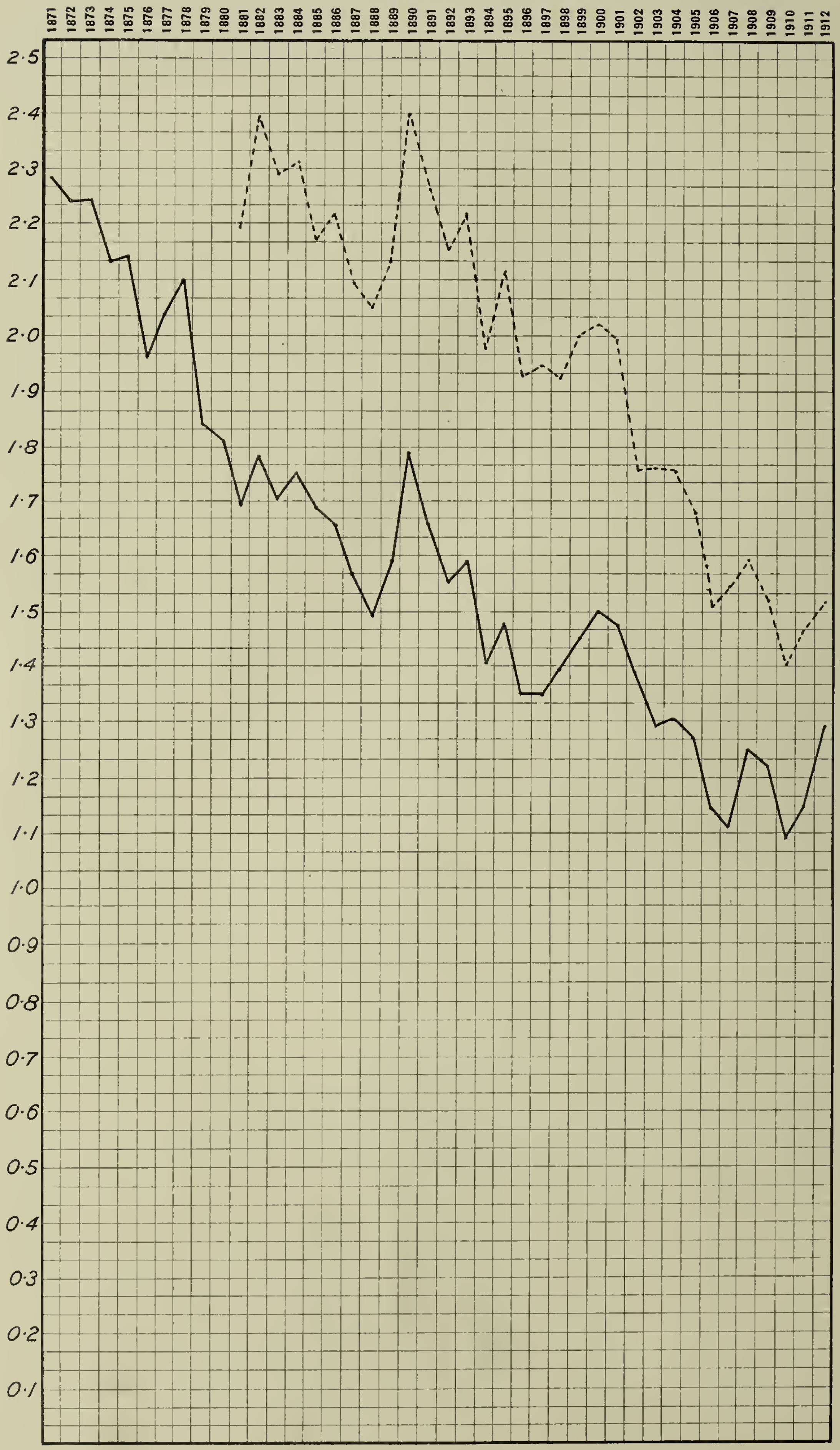
The deaths and death-rates from Tuberculosis have been as follows :—

	Pulmonary Tuberculosis.			Other Forms of Tuberculosis.		
	No. of Deaths.	Death-rate in Birmingham.	Death-rate in England and Wales.	No. of Deaths.	Death-rate in Birmingham.	Death rate in England and Wales.
1901	1120	1·47	1·26	395	·52	·54
1902	1071	1·38	1·23	285	·37	·51
1903	992	1·28	1·21	370	·48	·54
1904	1018	1·30	1·24	351	·45	·54
1905	994	1·26	1·14	322	·41	·49
1906	908	1·14	1·16	295	·37	·50
1907	898	1·11	1·15	343	·43	·47
1908	1021	1·24	1·12	287	·35	·47
1909	1008	1·22	1·09	248	·30	·45
1910	898	1·08	1·01	270	·32	·42
1911	958	1·14	—	272	·32	—
1912	1088	1·28	—	204	·24	—

CHART No. 3.

DEATH-RATES IN BIRMINGHAM FROM TUBERCULOSIS.

(Registration Area prior to 1901.)



ALL FORMS OF TUBERCULOSIS - - - - - - - - - - - -

PULMONARY TUBERCULOSIS ————————————

Chart No. 3 shows graphically the mortality rate from pulmonary tuberculosis in Birmingham during each year since 1871 and other forms of tuberculosis since 1881. It should be noted that the death-rate is now only half as high as it was forty years ago.

It will be noted that the mortality last year was rather high compared with six or seven previous years. It is probable that there may be a tendency for the deaths assigned to tuberculosis to increase in number during the next few years in Birmingham, mainly as the result of the greater attention paid to the disease, for formerly when patients died from bronchitis complicated with old-standing tuberculosis their deaths were certified as due to bronchitis only, while now they will almost certainly be recorded as due to tuberculosis and bronchitis, or *vice versa*, and according to the recognised methods of classification will be included as deaths from pulmonary tuberculosis, and thus will increase the apparent mortality from this disease. For many years past it has been a common practice to avoid mentioning tuberculosis on a death certificate if possible, because the relatives thought this a slur on their family, while in many other cases the disease was not noted in the certificate to avoid trouble with insurance companies.

A very striking decline has taken place in the death-rate from other forms of tuberculosis, amounting to about 50 per cent. in the twelve years given in the table on the page opposite.

The year 1912 will be memorable as the year in which Sanatorium Benefit under the National Insurance Act commenced. It is hoped that sanatorium benefit will produce three important results, viz.: (1) that it will demonstrate the extraordinary wastage which at present results from tuberculosis itself, and from the ill-health which precedes the disease; (2) that it will lead in course of time to the prevention of the low vitality which precedes tuberculosis, and is increased by the actual attack, and (3) that it will enable either a permanent arrest or a partial arrest of the disease to be made in a considerable number of cases.

Pulmonary Tuberculosis.

There were 4,394 cases of pulmonary tuberculosis reported during the year 1912 under the Local Government Board's Order requiring compulsory notification. This number refers only to cases that were notified by medical men for the first time. All cases in which a notification had been previously received under voluntary or other conditions of notification have been eliminated, so that the number 4,394 represents new cases reported for the first time.

It is very important to ascertain whether this number may be regarded as approximately the number of new cases of the disease which will be brought to light annually. It may be assumed with some confidence that the number is rather below than above what may be expected in future, until the time arrives when the preventive and curative work which is to be undertaken really makes a substantial reduction in the number of cases. It is very gratifying to be able to report that the medical practitioners of Birmingham are recognising their cases much earlier now than they did two or three years ago, and are reporting them, and it is to be hoped that a much larger number of cases in future will be recognised in an even earlier stage than at present. Then, in addition to the cases already recognised, it is hoped that a much larger number of patients will be found by examining contacts, and that by taking these contacts in time, and treating them, a considerable amount of serious illness will be prevented later.

The question is often asked as to how many cases of tuberculosis exist in the City. In attempting to supply the answer it is necessary to remember that at any one time a considerable proportion of the population are infected, but do not develop the disease. It is clearly desirable, therefore, that only cases which give clinical signs or symptoms should be counted as cases of the disease. This will exclude patients who are infected and will react to tuberculin, although giving no clinical signs either during the tuberculin test or without it.

The efficiency of notification in Birmingham may be compared with that in a number of the larger towns in England and Wales in the following table, the information being supplied by the local Medical Officers of Health. The result is stated as number of notified cases per 100 deaths :—

PULMONARY TUBERCULOSIS.

TOWN.	Death-rate per 1000.	Total Cases Notified.	Proportion of Cases to 100 Deaths.	TOWN.	Death-rate per 1000.	Total Cases Notified.	Proportion of Cases to 100 Deaths.
				Willesden ...	·93	487	329
Birmingham ...	1·28	4394	404	Rhondda ...	·66	315	300
Glasgow ...	1·32	2340	226	Sunderland ...	1·22	410	222
Liverpool ...	1·49	3690	329	Tottenham ...	1·00	408	287
Manchester ...	1·53	2396	216	East Ham ...	1·06	365	248
Sheffield ...	1·22	980	173	Blackburn ...	·82	250	229
Leeds	1·28	1452	254	Brighton ...	·99	352	269
Bristol ...	1·09	1093	279	Birkenhead ...	1·12	477	318
Edinburgh ...	1·26	1255	309	Leyton ...	·91	370	322
West Ham ...	1·13	982	298	Derby	·86	375	350
Bradford ...	1·26	921	253	Norwich ...	1·07	331	253
Newcastle ...	1·33	972	271	Southampton	1·34	336	210
Nottingham ...	1·17	911	298	Plymouth ...	1·10	294	237
Stoke-on-Trent	1·27	730	243	Stockport ...	1·22	357	264
Salford ...	1·47	1073	315	South Shields	1·50	478	290
Portsmouth ...	1·13	1267	475	Huddersfield ...	·82	193	214
Leicester ...	1·24	827	291	Coventry ...	1·04	411	357
Cardiff... ...	1·32	499	205	Burnley ...	·80	186	216
Bolton ...	1·00	321	176	Halifax ...	1·03	301	287

From this it will be seen that except in the case of Portsmouth no other town has a larger proportion of notified cases per 100 deaths ; indeed, it will be noted that as compared with certain other of the large towns the number of notifications in Birmingham is about twice as many, *e.g.*, in Manchester and Sheffield.

SEASONAL INFLUENCE OF PULMONARY TUBERCULOSIS.

The cases and deaths in the four quarters were as follows :—

	Cases Notified.	Deaths.
1st quarter	1332	341
2nd quarter	1047	276
3rd quarter	944	225
4th quarter	1071	246

AGE INCIDENCE OF PULMONARY TUBERCULOSIS.

The cases and deaths at various ages and the percentage fatality are shown below :—

	Cases Notified in 1912.	Deaths Registered in 1912 *	Percentage Mortality.*
Under 5 years	28	30	—
5 to 10 years	210	12	6%
10 to 15 „	295	25	8%
15 to 20 „	341	69	20%
20 to 25 „	550	93	17%
25 to 35 „	1238	259	21%
35 to 45 „	927	286	31%
45 to 55 „	530	175	33%
55 to 65 „	201	96	48%
Over 65 „	74	43	58%
All ages	4394	1088	25%

---

* The deaths are not generally those of persons notified during the same year, the illness in many cases being a long one.

It will be seen from the above that out of 4,394 new cases reported during the year, no less than 3,245 were at ages between 20 and 55 years of age, that is, during the most important years of life. It will also be noted that over 500 cases at school age were reported during the year.

SEX INCIDENCE OF PULMONARY TUBERCULOSIS.

In the following table the incidence of new cases of pulmonary tuberculosis among males and females is set out, as well as the deaths at the same ages:—

	Cases of Pulmonary Tuberculosis.		Deaths from Pulmonary Tuberculosis.	
	Males.	Females.	Males.	Females.
Under 5 years	13	15	16	14
5 to 10 ,,	126	84	6	6
10 to 15 ,,	151	144	8	17
15 to 20 ,,	169	172	33	36
20 to 25 ,,	234	316	47	46
25 to 35 ,,	555	683	162	97
35 to 45 ,,	471	456	172	114
45 to 55 ,,	315	215	109	66
55 to 65 ,,	139	62	73	23
Over 65 ,,	42	32	26	17
All ages	2215	2179	652	436

For the first time figures are available to show that the actual occurrence of tuberculosis is nearly as frequent among males as among females, while on the other hand the mortality among males, as shown by the 1912 figures, is nearly 50 per cent. heavier than among females. In previous reports relating to the incidence of the disease in the old Birmingham area, it was pointed out that the incidence of deaths among males for most years was nearly 100 per cent. more than among females. During 1912 the deaths among males were equal to 30 per cent. of the cases notified, while among females the proportion was about 20 per cent. These figures are very important from the point of view of prevention, as they indicate quite clearly that something is operating in the case of males, causing the mortality among them to be very much higher than among females.

The death-rate among all males living in Birmingham was 1·61 per 1,000, while that among all females was ·98 per 1,000.

DISTRIBUTION OF PULMONARY TUBERCULOSIS.

The following table shows the sickness rate from pulmonary tuberculosis, and the mortality from pulmonary tuberculosis in each of the municipal wards during 1912:—

PULMONARY TUBERCULOSIS.

			Sickness Rate.		Death Rate.	
NORTH-WEST DIVISION	District A.	St. Mary's	7·6	Average 7·2	2·59	Average 2·12
		St. Paul's	7·6		2·20	
		All Saints'	6·3		1·58	
	District B.	Soho	2·6	3·2	·50	·75
		Lozells	4·5		1·56	
		Handsworth ...	3·5		·66	
		Sandwell	2·4		·28	
NORTH-EAST DIVISION	District A.	St. Bartholomew's	9·8	7·5	1·95	1·54
		Duddeston and Nechells	6·7		1·66	
		Saltley	5·9		1·02	
	District B.	Aston	4·9	3·4	1·20	·98
		Washwood Heath...	4·2		1·08	
		Erdington North ...	1·6		·60	
		Erdington South ...	3·1		1·05	

				Sickness Rate.	Death Rate.	
SOUTH-EAST DIVISION	District A.	St. Martin's and Deritend ...	7·2	5·8	1·83	Average 1·45
		Balsall Heath ...	5·8		1·23	
		Sparkbrook ...	4·3		1·29	
	District B.	Small Heath ...	6·1	4·9	·90	·99
		Yardley	3·5		1·49	
		Acock's Green ...	5·1		·79	
		Sparkhill	4·8		·80	
SOUTH-WEST DIVISION	District A.	Market Hall ...	6·9	5·3	2·08	1·30
		Ladywood ...	7·5		2·20	
		Rotton Park ...	4·7		1·08	
		Edgbaston	3·9		·69	
		Harborne	3·6		·47	
	District B.	Selly Oak	3·2	2·9	·89	·75
		Moseley and King's Heath	3·3		·64	
		King's Norton ...	3·2		·92	
		Northfield	1·8		·55	

Chart No. 4 shows the distribution of the mortality over the City. The wards in which the death-rate was highest are coloured in the darkest shade, while Wards having the lowest rates are shown by the lightest colour.

OTHER FORMS OF TUBERCULOSIS.

During 1912 persons suffering from forms of tuberculosis other than pulmonary tuberculosis were not required to be reported, but since 1913 this is obligatory. The figures, therefore, available for 1912 deal with deaths only. The mortality rates from other forms of tuberculosis in Birmingham and in England and Wales for each year since 1901 are given on page 38.

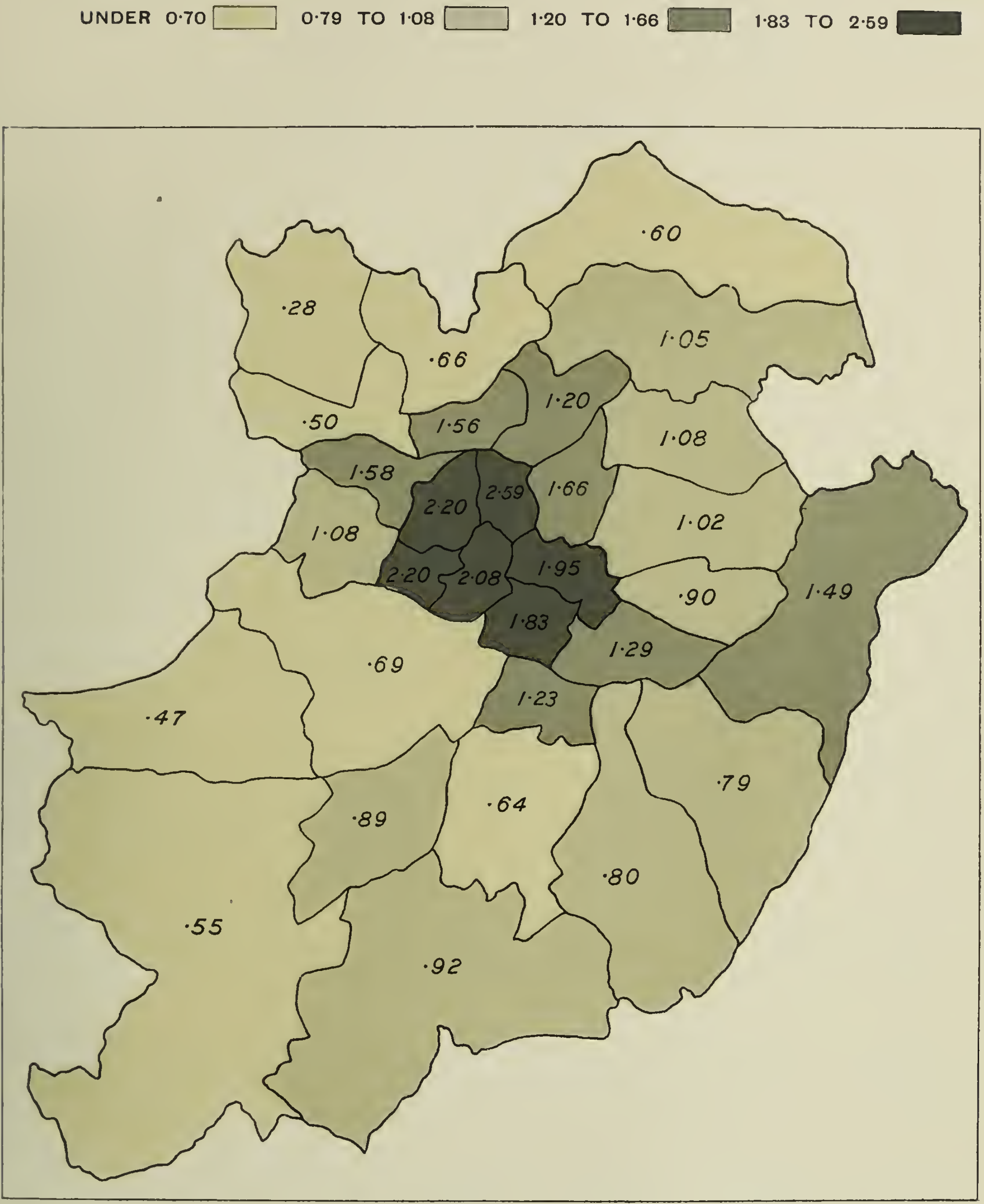
In the next table the mortality from this group of diseases is indicated in other towns during 1912 :—

OTHER FORMS OF TUBERCULOSIS.

TOWN.	Death rate per 1 000.	TOWN.	Death-rate per 1,000.
Birmingham	·24	Rhondda	·28
Glasgow	·65	Sunderland	·63
Liverpool	·41	Tottenham	·42
Manchester	·55	East Ham	·31
Sheffield	·41	Blackburn	·25
Leeds	·46	Brighton	·37
Bristol	·28	Birkenhead...	·43
Edinburgh	·56	Leyton	·35
West Ham	·36	Derby	·39
Bradford	·33	Norwich	·45
Newcastle-on-Tyne ...	·51	Southampton	·35
Nottingham	·33	Plymouth	·27
Stoke-on-Trent	·51	Stockport	·45
Salford	·64	South Shields	·39
Portsmouth	·32	Huddersfield	·37
Leicester	·39	Coventry	·32
Cardiff	·35	Burnley	·44
Bolton	·30	Halifax	·38
Willesden	·25		

CHART No. 4.

DEATH-RATES FROM PULMONARY TUBERCULOSIS IN WARDS.



WARDS.

SANDWELL	0·28	ROTTON PARK	1·08
HARBORNE	0·47	WASHWOOD HEATH	1·08
SOHO	0·50	ASTON	1·20
NORTHFIELD	0·55	BALSALL HEATH	1·23
ERDINGTON, NORTH	0·60	SPARKBROOK	1·29
MOSELEY AND KING'S HEATH	0·64	YARDLEY	1·49
HANDSWORTH	0·66	LOZELLS	1·56
EDGBASTON	0·69	ALL SAINTS'	1·58
ACOCK'S GREEN	0·79	DUDDESTON AND NECHELLS	1·66
SPARKHILL	0·80	ST. MARTIN'S AND DERITEND	1·83
SELLY OAK	0·89	ST. BARTHOLOMEW'S	1·95
SMALL HEATH	0·90	MARKET HALL	2·08
KING'S NORTON	0·92	LADYWOOD	2·20
SALTLEY	1·02	ST. PAUL'S	2·20
ERDINGTON, SOUTH	1·05	ST. MARY'S	2·59

In the following table the mortality at different age groups is given:—

	Tuberculous Meningitis.	Peritoneum and Intestines.	Spinal Column.	Joints.	Other Organs.	Disseminated.
Under 1 year	19	15	—	—	—	11
Between 1 and 2 years ...	14	11	—	1	3	3
,, 2 ,, 3 ,, ...	20	6	—	—	1	3
,, 3 ,, 4 ,, ...	6	1	—	—	—	1
,, 4 ,, 5 ,, ...	3	1	1	—	—	1
,, 5 ,, 10 ,, ...	15	2	1	2	1	2
,, 10 ,, 15 ,, ...	2	3	1	—	—	4
,, 15 ,, 20 ,, ...	3	3	—	—	1	1
,, 20 ,, 25 ,, ...	2	1	1	—	1	3
,, 25 ,, 35 ,, ...	1	—	3	2	2	2
,, 35 ,, 45 ,, ...	3	2	2	—	2	2
,, 45 ,, 55 ,, ...	—	1	2	—	2	—
,, 55 ,, 65 ,, ...	—	1	1	—	—	—
Over 65 years	—	1	—	2	1	2

It will be noted from these figures that unlike pulmonary tuberculosis the forms of the disease occurring under the above headings are far more fatal on the whole at ages under 5 than over 5, no less than 121 deaths occurring at these early ages, as compared with 83 at the later ages. There is almost certainly a different group of causes in operation producing this result, as compared with the causes in operation in the production of pulmonary tuberculosis. It is probable that one of the most important of these is infection from tubercular milk.

ADMINISTRATIVE PROCEDURE DURING 1912.

All notified cases are visited by one of the ten specially-trained nurses who act as tuberculosis visitors, their reports being supervised by the assistant medical officers for the districts. In addition to the primary visit subsequent visits are made at intervals, with a view to ascertaining that the instructions given are being followed. The details of the work of these visitors during 1912 were precisely on the lines outlined in the annual report of the Medical Officer of Health for 1911.

During the year there were admitted for treatment at one or other of the Birmingham sanatoria 833 patients. Of these 603 were dealt with at Yardley Road Sanatorium, 149 were sent to Salterley Grange Sanatorium (including 98 transferred from Yardley Road), and 179 were treated at West Heath.

The total bed accommodation being quite inadequate to deal with all the cases it was impossible to accommodate more than one-half of the patients seeking admission. The number admitted and discharged from each of the sanatoria during the 52 weeks to which this report relates was as follows:—

	Yardley Road.	Salterley Grange.	West Heath.	Total.
In Sanatorium at beginning of year ...	55	34	17	106
Admitted during year	603	149*	179	931*
Discharged during year	487	141	166	794
Transferred to Salterley Grange ...	98	—	—	98
Died during year...	2	0	3	5
In Sanatorium at end of year ...	71	42	27	140

*Including the 98 patients transferred from Yardley Road to Salterley Grange.

Since the end of the year a considerable increase in the Sanatorium accommodation has taken place, and in the near future there will be over 400 beds available.

As regards the treatment, Dr. Dixon, the chief Tuberculosis Officer, has supplied the following short statement of what has been done at Yardley Road Sanatorium during the calendar year ending December 31st, 1912, which differs slightly from the registration year.

"During the past year 603 patients have been admitted to the Yardley Road Sanatorium; a large number of them were suffering from pulmonary tuberculosis in a well-marked form, tubercle bacilli being present in the sputum of no less than 344. This is a high percentage, but it should be stated that in numerous instances as many as eight examinations were undertaken before the bacillus was discovered. The treatment at Yardley Road, as at the other Municipal Sanatoria, is dietetic and hygienic, or what is described as 'open-air' treatment combined with tuberculin injections, graduated exercise and labour, and continuous inhalations; in addition other modern methods of treatment are utilised.

"Combined with treatment every effort is made to educate the patients whilst in the Sanatoria, so that they may cease to be sources of infection to their fellows. Instruction is given in the adaptation of Sanatorium methods to home life, in sputum destruction, and in the economic and feeding values of different articles of diet; also lectures are given from time to time to which relatives of the patients are invited, and the knowledge so obtained by the friends is of value to the sufferer in his endeavour to carry on the treatment in his home.

"An examination of the clinical notes of the 603 persons admitted to the Sanatorium shows that no less than 249 had been in contact with relatives who were said to be suffering from tuberculosis; many others had been living with relatives who were suffering from 'chronic bronchitis' and 'winter cough,' which in some instances might be tuberculous in nature.

"During the year 1,305 persons were examined at the Tuberculosis Centre with a view to treatment, and at the same place there were 19,221 attendances for treatment and advice.

"Of the 587 who were discharged from Yardley Road, 413 continued their treatment at the Centre, and suitable patients on their return from Salterley Grange Sanatorium also continued treatment there; in addition to these there were some whose whole course of treatment was carried out at the Centre; these combined numbered 199.

"Of the total 612 out-patients entered on the register at the Centre during the year, 105 had completed a course of treatment by the end of the year, 172 had discontinued their treatment and ceased to attend, whilst of the remaining 335 undergoing treatment 149 may be classified as having completed less than one-half, and the remaining 186 as having completed more than a half of their treatment.

"It is to be regretted that many patients discontinue work as soon as they are told that they are consumptive, although this course may not have been recommended by their doctor. By so doing their food supply in many instances is impoverished, which does more harm than the continuance of their employment."

Almost identically the same line of treatment was carried out at West Heath, where 179 patients were admitted during the year. At Salterley Grange Sanatorium, however, a much more extended period of treatment was given to patients requiring longer institutional treatment.

Full treatment at the Tuberculosis Centre was not commenced during 1912; indeed, a considerable portion of the time of the Public Health and Housing Committee during the year was occupied in negotiations locally and with the Government Departments as to a future scheme of action for dealing with Tuberculosis.

TUBERCULOSIS AND WORKSHOP INSPECTION.

For many years it has been evident that the conditions under which a large number of people are employed in Birmingham have a powerful influence in determining the prevalence of tuberculosis, and with a view to inducing manufacturers to take steps to improve these conditions, the following memorandum was sent to each manufacturer in Birmingham:—

City of Birmingham.

MEMORANDUM ON TUBERCULOSIS AND FACTORIES AND WORKSHOPS.

There appears to be no doubt that a considerable amount of harm is done to workpeople who are employed in badly-ventilated, dark, or damp factories, particularly when these conditions are associated with a dust-laden atmosphere. The damage in the first instance, which can often be traced back to conditions of employment, is a lowering of the resistance to disease, or the production of a soil favourable for infection at a later period by the germ of tuberculosis, from which tuberculosis follows in one or other of its various forms.

Tuberculosis is still by far the most common cause of death in Birmingham, notwithstanding the fact that the disease is diminishing as a result of the better conditions of housing, factory labour, food supply, etc. About 1,200 deaths are caused annually in Birmingham as the result of tuberculosis in all its forms. At any one time there are in the City probably over 10,000 people suffering from the disease. In addition, tuberculosis is probably the most expensive disease, as it is of long duration, and the commonest disease to attack the bread-winner of the family.

That factories and workshops play an important part in the production of the disease is indicated by the following facts :—

A. Tuberculosis usually attacks young adults after they have commenced industrial employment. The following table shows the number of deaths from tuberculosis of the lung (phthisis) in Birmingham during the last year at different age periods, and also the percentage to the total deaths from all causes at each age period :—

Under 15 years	39	or 1	per cent.
15 and under 25	154	or 36	,,
25 ,, 35	214	or 35	,,
35 ,, 45	239	or 26	,,
45 ,, 55	181	or 16	,,
55 ,, 65	94	or 7	,,
65 and upwards	37	or 1	,,

B. It is the experience nearly everywhere that phthisis is enormously more prevalent among the members of one trade than of another. It is difficult to explain the wide difference which occurs, other than by assuming that the conditions of employment (especially the presence of silicious dust) in these particular trades are favourable to the spread of consumption. It is almost inconceivable that the explanation is that people with a consumptive tendency select trades in which the mortality from the disease is four or five times greater than in others.

Prevention of Tuberculosis in Factories and Workshops.

The following suggestions are made for the guidance of manufacturers as being the most obvious means which can be taken to remedy the conditions which are prejudicial to health :—

I.—Ventilation.

It is important that all factories and workshops should be well ventilated. Generally, it will be found in practice that the best way of testing whether the ventilation is reasonably good is for a person who has been in the open air for some minutes to enter the workshop and note whether the air feels close or has an objectionable smell. Care of course must be taken to distinguish between the objectionable smell from trade processes and air fouled by respiration.

Window ventilation can seldom be relied on alone in the case of workshops in which persons are employed immediately below sash or casement windows. During cold weather such a means of ventilation produces so much draught that even a healthy person cannot bear it. While this is generally the case there are exceptions when windows may properly be used, particularly when the window opening is constructed on the hopper principle.

In most workshops it will be found that openings on the Tobin's tube principle, or air bricks provided with a fixed baffle, as in the Sheringham valve, provide a sufficient supply of air. It is better to have numerous small openings, each constructed so as to direct the incoming air upwards, than to have one large opening. Such openings should be placed on opposite walls to effect "through" ventilation. In rooms where large numbers of workers are employed mechanically-driven fans should be provided. The cost of installing and maintaining these is lower now than formerly; such fans should be so arranged as to avoid causing draught.

Every system of ventilation requires constant attention, particularly with a view to seeing that workpeople do not close the inlets. Both in cold and in warm weather there should be an adequate and constant supply of fresh air in every room.

II.—Dampness and Want of Light.

These conditions are well known to predispose to tuberculosis. Dampness in a factory or workshop can in most instances be readily remedied by structural alterations. Darkness on the other hand may be due to various causes. It is particularly undesirable that workpeople should be employed in workshops in which the lighting in ordinary language is dull. The cause of dulness may be insufficient window space, or dirty windows, or windows obstructed by other buildings. Such workshops should be entirely abandoned if the conditions mentioned cannot be remedied, as they are undoubtedly unwholesome as workshops, though they might be used as store-rooms in which employment is intermittent.

III.—Cleanliness and Dust Removal.

Perhaps in no respect are the workshops, in Birmingham needing amendment more than in that of general cleanliness. A stricter observance of cleanliness will not only benefit the employees while in the works, but will greatly assist in the general adoption of a higher standard of cleanliness at home. A workshop should be kept at least as clean as a dwelling house, and it is most important that all workshops should be dusted daily, and that there should be systematic cleansing of floors, benches, etc., by washing with soap and water where this is practicable.

Dusty trades undoubtedly largely predispose to phthisis. In many of these trades the mortality among the workers from consumption is excessive, and it is, therefore essential that manufacturers should maintain in full efficiency the appliances required by the Factory Act for collecting and removing the dust produced in the trade processes carried on. Unless the fans, ducts, etc., are frequently tested and cleaned, they soon become ineffective. H.M. Inspector of Factories, 174 Corporation Street, Birmingham, will always be glad to give advice as to exhaust ventilation and general ventilation in factories.

In every instance where dust is produced adequate mechanical or other means should be provided so as to prevent such dust being inhaled by the workers.

If dust is allowed to remain in the workshop, it will be disturbed by the opening of doors and windows, and by the movements of the workers, and will thus enter the air and be inhaled. The floors should be damped before sweeping, to prevent the dust from rising. Many workroom floors and benches are uneven and dilapidated. The surfaces should be made smooth and impervious so that they can be efficiently cleaned. To facilitate the cleansing, the floors, benches and shelves should be kept as clear as possible. They are often littered with dusty materials, waste and rubbish. It should be made some person's duty to cleanse the shops daily or weekly as required. Unless careful supervision is exercised, it is not usually sufficient to leave the work of cleansing to be done jointly by all the workers in a shop.

IV.—Infection.

Tuberculosis is now a notifiable disease. The Insurance Act empowers the Local Insurance Committee to grant sanatorium benefit to insured persons if approved by them. Cleanliness of the factory and avoidance of the habit of spitting are the best means for preventing its spread in the workshop. Tubercular subjects will be warned by the Tuberculosis Officer to make use of special spittoons.

V.—SPITTING.

The habit of spitting on the floors of workshops should be made a punishable offence, as it is a dangerous and dirty habit which is entirely unnecessary. Notices respecting spitting, printed on thick cardboard, and suitable for hanging in factories and workshops, can be obtained free of charge from the Medical Officer of Health at the Council House, Congreve Street. Such cards can be supplied with the wording as follows :—

"The Medical Officer of Health desires to point out that SPITTING on the FLOOR is liable to SPREAD DISEASE."
(Size of Card, 12 inches by 7¼ inches.)

"SPITTING on the FLOOR SPREADS DISEASE."
(Size of Card, 12 inches by 7¼ inches.)

"PREVENTION OF CONSUMPTION. Persons are requested NOT TO SPIT on Floors or Walls. JOHN ROBERTSON, M.D., Medical Officer of Health, Health Department, Council House, Birmingham."
(Size of Card, 15 inches by 10 inches.)

TUBERCULOSIS AND THE MILK SUPPLY.

Mr. John Malcolm, Veterinary Superintendent, has submitted the following report on the work done during the year :—

HOLLIDAY STREET WHARF,
July, 1913.

GENTLEMEN,

I have pleasure in submitting herewith a report on the work done last year in connection with the inspection of cows and cowsheds and the efforts to minimise tubercle infection in the milk supply.

INSPECTION OF COWS AND COWSHEDS IN THE CITY.

The inspection of cows and cowsheds in the City during the year 1912 has been carried out as in former times. There are in Greater Birmingham 174 farms with 346 sheds containing 2,376 cows from which milk is sold for human consumption.

During the year monthly visits of inspection have been paid to cows and cowsheds in the City area. All the worst sheds in the added areas have now been structurally altered so that they comply with the City bye-laws and regulations, but a number still require modification.

On the whole the cows inspected during the year have been found clean and healthy.

TUBERCULOSIS AND THE MILK SUPPLY.

As in former years, the work has been carried out on the following lines :—

(*a*) The detecting of infected milk.
(*b*) The eradication of tuberculosis from dairy herds.

(*a*) In connection with this, samples of mixed milk have been taken from churns which come from dairies outside the, City as well as samples of mixed milk taken from dairies within the City area. Altogether 138 mixed samples were taken; of these 111 were free and 27 were found infected.

The farms from which the 27 samples came were visited, and the cows individually examined, and further samples taken. As a result 12 cows were detected as giving infected milk and all of these were slaughtered. In several cases where the infecting cow was not detected the owners admitted having sold one or more cows between the time of taking the next sample and visiting the farm.

(*b*) The process of eradicating tuberculosis from dairy herds has been continued. At the end of the year 13 herds, numbering 556 cows, were being dealt with; of these 11 herds, numbering 483 cows, are free and two herds were in the process of being freed. During the year the procedure has been discontinued in two free herds. In one new herd the procedure has been adopted, and in another herd the procedure discontinued in 1911 was re-adopted in 1912.

This leaves a total of 13 herds being dealt with at the end of 1912, as shown in the accompanying tabulated list:—

List of Herds dealt with in 1912.

Herd.	Number of Cows in herd.	Herds being dealt with during 1912.	Herds free from Tuberculosis.	Herds being freed from Tuberculosis.	Breeding Herds.	Non-breeding Herds.	Mixed-breeding and Non-breeding Herds.
No. 1	44	1	1	—	—	—	1
" 2	75	1	1	—	—	—	1
" 3	33	1	1	—	—	—	1
" 4	49	1	1	—	—	1	—
" 5	9	1	1	—	1	—	—
" 6	17	1	1	—	—	1	—
" 7	31	1	1	—	—	—	—
" 8	109	1	1	—	1	—	—
" 9	20	1	1	—	1	—	—
" 10	65	1	1	—	1	—	—
" 11	31	1	1	—	1	—	—
	483	11	11	—	5	2	3
" 12	50	1	—	1	1	—	—
" 13	23	1	—	1	1	—	—
	556	13	11	2	7	2	3

Cows Tested.

From the tabulated list given below it will be seen that 1,009 cows were tested during the year. Of these 817 passed, 184 failed, and 8 were doubtful.

No. of Herd.	Tested.	Passed.	Doubtful.	Failed.
1	106	86	—	20
2	192	175	5	12
3	51	43	—	8
4	49	27	—	22
5	12	6	—	6
6	36	17	—	19
7	41	37	—	4
8	207	198	—	9
9	20	20	—	—
10	86	74	—	12
11	42	37	—	5
12	39	31	—	8
13	72	32	3	37
Others	56	34	—	22
	1,009	817	8	184

The testing of the herds was again carried out partly by the Corporation Veterinary Officers and partly by the Dairymen's Veterinary Surgeon acting on behalf of the Corporation. The cost of this work during the year was £171 5s. 0d., of which £28 9s. 0d. was for tuberculin and £142 16s. 0d. for veterinary fees and expenses.

Jno. Malcolm,
Veterinary Superintendent.

SYPHILIS.

The number of deaths actually certified as due to this disease was 46, of which 38 were under one year of age. These figures give an entirely fallacious idea of the large amount of damage still done by syphilis. In a great many countries the question of notification of all forms of venereal disease is being taken into consideration, and in many of the largest American cities notification of syphilis, gonorrhœa, and other venereal diseases is compulsory.

While the above figures give no adequate idea of the extent of the harm done by the disease, there is a general consensus of opinion among medical practitioners in the City that there are now fewer cases than formerly, and that at the same time the disease is of a milder character.

CANCER.

Under this heading are included all deaths from the many forms in which the disease manifests itself, such as carcinoma, scirrhus, epithelioma, rodent ulcer and sarcoma. The total number of deaths was 791, equal to a death-rate of ·93 per 1,000. In other words, about one in fifteen of the deaths during the year was caused by cancer. The death-rates for previous years were as follows:—

Mortality from Cancer.

	No. of Deaths.	Death-rate in Birmingham.	Death-rate in England and Wales.
1901 ...	552	·73	·84
1902 ...	530	·68	·85
1903 ...	592	·76	·87
1904 ...	578	·74	·88
1905 ...	643	·81	·89
1906 ...	664	·83	·92
1907 ...	645	·80	·91
1908 ...	702	·85	·93
1909 ...	678	·82	·96
1910 ...	737	·89	·97
1911 ...	748	·89	—
1912 ...	791	·93	—

Cancer is one of the very few diseases which shows a progressive annual increase in the deaths attributed to it. This increase is no doubt partly due to improved diagnosis; it is difficult to estimate whether there is an actual increase in the prevalence of the disease, and if so, to what extent. The disease is, however, now receiving an ever-increasing amount of attention.

The mortality from Cancer is higher among women than among men. Last year the deaths comprised those of 349 males and 442 females. The excess among females holds good at practically all age-periods. It is due to the frequency with which the female reproductive organs and the breast are attacked. The deaths are shown in the table on the opposite page, divided into age periods, and according to the part of the body affected.

Men suffer far more than women from cancer of the mouth ; indeed, the disease is infrequent in the mouth in women. Men died in rather larger numbers than women from cancer of the stomach and liver. Intestinal cancer seems to have been as common in the one sex as the other, while there is an excess in the male deaths under the heading "Other Organs." All these higher mortalities among males are, however, more than wiped out by the heavy mortality among women from cancer of the generative system and the breast.

The death-rates from cancer in the Wards are shown in the next table :—

DEATH-RATES FROM CANCER.

				Average
NORTH-WEST DIVISION	District A.	St. Mary's	1·09	·99
		St. Paul's	·97	
		All Saints'	·91	
	District B.	Soho	1·00	·89
		Lozells	·94	
		Handsworth	·89	
		Sandwell	·72	
NORTH-EAST DIVISION	District A.	St. Bartholomew's	1·00	·78
		Duddeston and Nechells	·66	
		Saltley	·67	
	District B.	Aston	·71	·72
		Washwood Heath	·57	
		Erdington North	·80	
		Erdington South	·80	
SOUTH-EAST DIVISION	District A.	St. Martin's	1·09	1·00
		Balsall Heath	1·20	
		Sparkbrook	·72	
	District B.	Small Heath	·80	·86
		Yardley	·71	
		Acock's Green	·99	
		Sparkhill	·94	
SOUTH-WEST DIVISION	District A.	Market Hall	1·38	1·27
		Ladywood	1·24	
		Rotton Park	·87	
		Edgbaston	1·29	
		Harborne	1·55	
	District B.	Selly Oak	·65	·98
		Moseley and King's Heath	1·24	
		King's Norton	·82	
		Northfield	1·23	

It has already been pointed out that the death-rate from cancer, unlike that of most of the other prominent causes of deaths, appears to be affected very little, if at all, by the general healthiness of the Ward. Thus the highest rates last year were in Harborne, Market Hall, and Edgbaston, while the lowest were in Washwood Heath, Selly Oak, Duddeston and Nechells and Saltley, wards which seem to have very little in common.

Deaths from Cancer in 1912.

Ages.	Mouth.			Stomach, Liver, &c.			Peritoneum, Intestine, etc.			Female Organs of Reproduction.			Breast.			Skin.			Other Organs.			Total.		
	Males.	Females.	Total.	Males	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females	Total.	Males.	Females.	Total.
Under 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—	1
1 –	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	2	3
5 –	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	1	1	2
10 –	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
15 –	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3	3	—	3
20 –	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	1	—	1	2	—	2
25 –	—	—	—	3	2	5	1	2	3	—	1	1	—	2	2	—	—	—	7	2	9	11	9	20
35 –	3	—	3	7	9	16	—	7	7	—	19	19	—	12	12	—	—	—	13	6	19	23	53	76
45 –	12	—	12	36	23	59	14	15	29	—	32	32	—	19	19	—	—	—	20	16	36	82	105	187
55 –	12	1	13	47	35	82	25	19	44	—	20	20	—	19	19	1	—	1	21	16	37	106	110	216
65 –	8	1	9	26	36	62	27	27	54	—	22	22	—	19	19	1	—	1	25	12	37	87	117	204
75 –	4	1	5	10	12	22	7	6	13	—	6	6	—	5	5	—	1	1	7	10	17	28	41	69
85 –	—	—	—	2	1	3	1	—	1	—	—	—	—	1	1	—	—	—	1	1	2	4	3	7
All Ages	40	4	44	131	118	249	76	76	152	—	100	100	—	77	77	2	1	3	100	66	166	349	442	791

ALCOHOLISM.

Under the modern method of classification deaths from alcoholism are recorded under the disease produced by the alcoholism rather than under the cause of the disease itself.

Owing to this change in method, comparative figures are not now available for past years. The number of deaths ascribed to alcoholism, without any mention of the resultant disease, was 19; but this, of course, does not give the least idea of the mortality which results from the abuse of alcohol. It can safely be stated, however, that for a good many years past there has been a steady decline in the deaths from alcoholism, not only in Birmingham, but in the country as a whole.

CEREBRO-SPINAL FEVER AND ACUTE POLIO-MYELITIS.

In March, 1906, cerebro-spinal fever was made a voluntarily notifiable disease by medical men, that is to say, the Public Health Committee decided to pay for notifications of the disease at the ordinary rate, and in December, 1911, polio-myelitis was added to the list of diseases which are compulsorily notifiable in Birmingham. On September 1st, 1912, cerebro-spinal fever and acute polio-myelitis were both made compulsorily notifiable diseases in the country as a whole. No epidemic outbreak of either disease was reported during 1912. The notified cases of cerebro-spinal fever numbered 5; and of these 3 died, viz., one child and two adults.

Of acute polio-myelitis 18 cases were notified, 15 being children under five years of age, with four deaths. All the cases of cerebro-spinal fever and acute polio-myelitis were personally enquired into by the Assistant Medical Officers of Health. In two instances there was some evidence of infectiousness. In one household a severe case was followed by two mild cases in children in the same house, while in another household an interval of 48 hours elapsed between the onset of the symptoms in the two members of the household attacked. All the other patients were separate single cases, without any direct evidence of the source of infection.

A considerable number of the patients were removed to hospital for treatment or diagnosis. Arrangements have been in existence for a number of years in the case of cerebro-spinal fever for the diagnosis of cases by bacteriological methods when a request is made by the medical practitioner in attendance.

BRONCHITIS AND PNEUMONIA.

These two diseases were the certified causes of death of 2,090 persons, and if Pleurisy, be added this group of diseases is by far the most important cause of death in the City. The figures for bronchitis and pneumonia are set out in the accompanying table, which shows that in the case of both diseases there has been in recent years a progressive decline.

DEATH-RATES FROM BRONCHITIS AND PNEUMONIA.

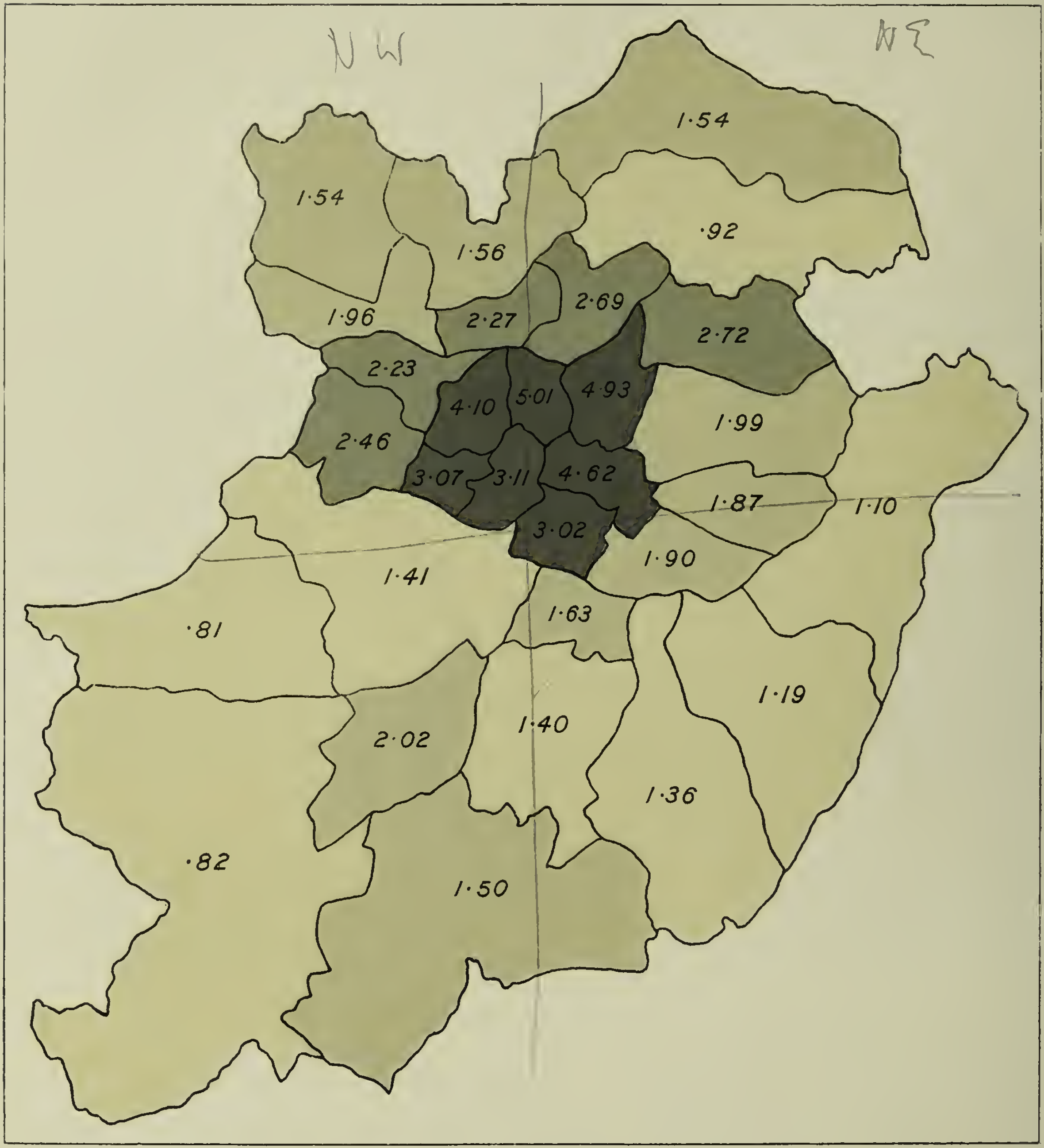
	Bronchitis.				Pneumonia.			
	Birmingham.		England and Wales.		Birmingham.		England and Wales.	
1901 ...	1·80	Average 1·62	1·37	Average 1·24	1·55	Average 1·44	1·15	Average 1·27
1902 ...	1·64		1·32		1·46		1·41	
1903 ...	1·46		1·11		1·32		1·22	
1904 ...	1·76		1·25		1·49		1·28	
1905 ...	1·43		1·14		1·37		1·30	
1906 ...	1·38	Average 1·41	1·04	Average 1·09	1·32	Average 1·30	1·22	Average 1·23
1907 ...	1·49		1·22		1·47		1·35	
1908 ...	1·47		1·10		1·22		1·19	
1909 ...	1·47		1·15		1·36		1·30	
1910 ...	1·24		0·96		1·15		1·11	
1911 ...	1·25		—		1·16		—	
1912 ...	1·26		—		1·20		—	

The mean mortality from bronchitis in the greater Birmingham area during the past three years was 23 per cent. below that for the three years ending 1903. Similarly pneumonia caused a mortality 19 per cent. below that for 1901-1903 inclusive. A similar reduction is also shown for the all-England figures.

CHART No. 5.

DEATH-RATES FROM BRONCHITIS AND PNEUMONIA IN WARDS.

UNDER 1·50 ▢ 1·50 TO 2·02 ▢ 2·23 TO 2·72 ▨ 3·02 TO 5·01 ■



WARDS.

HARBORNE	0·81	SOHO	1·96
NORTHFIELD	0·82	SALTLEY	1·99
ERDINGTON, SOUTH	0·92	SELLY OAK	2·02
YARDLEY	1·10	ALL SAINTS'	2·23
ACOCK'S GREEN	1·19	LOZELLS	2·27
SPARKHILL	1·36	ROTTON PARK	2·46
MOSELEY AND KING'S HEATH	1·40	ASTON	2·69
EDGBASTON	1·41	WASHWOOD HEATH	2·72
KING'S NORTON	1·50	ST. MARTIN'S AND DERITEND	3·02
ERDINGTON, NORTH	1·54	LADYWOOD	3·07
SANDWELL	1·54	MARKET HALL	3·11
HANDSWORTH	1·56	ST. PAUL'S	4·10
BALSALL HEATH	1·63	ST. BARTHOLOMEW'S	4·62
SMALL HEATH	1·87	DUDDESTON AND NECHELLS	4·93
SPARKBROOK	1·90	ST. MARY'S	5·01

In the next table is shown the mortality rate in each ward in the City from bronchitis and pneumonia, and from the two diseases together:—

Death-Rates from Bronchitis and Pneumonia.

			Bronchitis.	Pneumonia.	Total.
North-West Division	District A.	St. Mary's	2·74	2·27	5·01
		St. Paul's	1·73	2·37	4·10
		All Saints'	1·06	1·17	2·23
	District B.	Soho	1·15	·81	1·96
		Lozells	1·06	1·21	2·27
		Handsworth	·43	1·13	1·56
		Sandwell	·88	·66	1·54
North-East Division	District A.	St. Bartholomew's	2·35	2·27	4·62
		Duddeston and Nechells	2·34	2·59	4·93
		Saltley	1·17	·82	1·99
	District B.	Aston	1·47	1·22	2·69
		Washwood Heath	1·17	1·55	2·72
		Erdington North	·67	·87	1·54
		Erdington South	·49	·43	·92
South-East Division	District A.	St. Martin's and Deritend	2·11	·91	3·02
		Balsall Heath	·97	·66	1·63
		Sparkbrook	1·21	·69	1·90
	District B.	Small Heath	1·11	·76	1·87
		Yardley	·91	·19	1·10
		Acock's Green	·52	·67	1·19
		Sparkhill	·75	·61	1·36
South-West Division	District A.	Market Hall	1·73	1·38	3·11
		Ladywood	1·45	1·62	3·07
		Rotton Park	1·10	1·36	2·46
		Edgbaston	·57	·84	1·41
		Harborne	·27	·54	·81
	District B.	Selly Oak	·93	1·09	2·02
		Moseley and King's Heath	·64	·76	1·40
		King's Norton	·68	·82	1·50
		Northfield	·41	·41	·82

From this it will be seen that by far the heaviest mortality occurs in the central areas. The chart shows in a graphic manner what the figures indicate.

The next table shows the ages at death of the various persons who died from varieties of bronchitis or pneumonia :—

	Bronchitis.	Broncho-Pneumonia.	Lobar Pneumonia.	Undefined Pneumonia.
Under 5 years	271	432	45	109
5 to 10 ,,	6	10	5	15
10 to 15 ,,	1	2	6	3
15 to 20 ,,	—	—	4	6
20 to 25 ,,	1	—	10	4
25 to 35 ,,	7	3	17	21
35 to 45 ,,	31	5	34	32
45 to 55 ,,	74	7	30	26
55 to 65 ,,	184	14	25	34
65 to 75 ,,	299	11	18	49
75 to 85 ,,	166	19	9	9
85 and over	33	2	—	1

As regards the bronchitis deaths mentioned on page 53, two groups ought to be available, viz., the acute and the chronic, but, unfortunately, the certificates of causes of death do not define this. If this definition were possible, it could be shown that the ages at which bronchitis is prevalent are (1) in young children, who die of acute bronchitis, and (2) old people, who die of a chronic form of the disease, frequently causing heart and other complications.

In regard to pneumonia, the two forms, lobar and lobular, are widely different, the lobar variety being common among adults from 25 to 65 years of age, while the lobular is almost entirely confined to children.

Possibly a very large proportion of the deaths from bronchitis and pneumonia are due to carelessness or ignorance of the ordinary laws of health.

PUERPERAL FEVER AND ACCIDENTS OF CHILD-BIRTH.

The number of cases of puerperal fever is set out for each year since 1901 in the table below, together with the mortality from this cause and from other accidents of child-birth :—

	Puerperal Fever.		Other Accidents of Child-birth.	Total Deaths.	Rate per 1,000 Births.
	Cases.	Deaths.			
1901	50	35	60	95	3·98
1902	55	30	53	83	3·42
1903	47	28	63	91	3·80
1904	50	34	48	82	3·38
1905	53	30	51	81	3·53
1906	44	26	70	96	4·09
1907	64	35	43	78	3·36
1908	32	12	55	67	2·79
1909	39	23	35	58	2·57
1910	42	33	47	80	3·59
1911	42	36	48	84	3·82
1912	78	27	45	72	3·25

There is an apparent increase in the prevalence of puerperal fever during the year, judged by the number of cases notified, but this excess is probably entirely due to the very much larger number of cases notified now than formerly because there is hospital accommodation available for the patients. Judged by the number of deaths the prevalence was approximately an average one. It should be pointed out that the definition of puerperal fever for the purpose of death classification is a wide one, and includes a number of cases which would rarely if ever be notified by the medical attendant; hence the proportion of deaths to cases appears higher than is really the case.

In March, 1911, the Public Health Committee commenced to contribute to the funds of the Women's Hospital for the treatment of cases of puerperal fever. At that time two beds were set aside for such cases at a total cost for hospital accommodation and medical treatment of £320 per annum. Immediately this accommodation became available it was found to be so much appreciated by patients and doctors that it became inadequate. In July, 1912, as the result of representations made by the Women's Hospital, the Public Health Committee agreed to fourteen beds being set aside, at a cost of £72 per bed occupied per annum. In order to make this provision, the Committee of the Women's Hospital undertook to erect new buildings, so that this highly dangerous type of case could be efficiently dealt with. The new beds will be available about the middle of 1913.

Modern methods render it necessary that such patients should be treated in hospital rather than in private dwelling-houses, it being quite impossible to carry out the operative and vaccine treatment, or indeed any kind of proper treatment, in many of the small houses in the City, with a result that in the past many women have died because proper treatment could not be obtained, while others who did not die were left with permanent damage to health because of the lack of proper treatment.

But apart altogether from the question of actual treatment of such patients, which, after all, is not the immediate concern of the Public Health Committee, the removal of these highly infectious cases from the practice of doctors, midwives, and nurses will do a great deal towards limiting the number of cases that occur annually.

It is probable that the number of cases of puerperal fever will largely increase within the next few years. This is due not to any real increase in the number of patients infected, but to the fact that the less serious cases will be reported in order to obtain the necessary treatment. Instead of the 78 cases reported during 1912, it is probable that there were in the City several hundreds of patients who suffered from septic infection during the puerperium, some of these of so mild and transitory a character that there was no need to pay any attention to them. Others, however, lead to chronic trouble, so that while the mother recovers to a certain extent her health is damaged for a long period afterwards. Many of these cases have escaped notification in the past, but will be notified in increasing numbers in the future.

The actual number of patients treated during 1912 at the Women's Hospital was 46, of whom 44 were suffering from ordinary puerperal fever, and 2 were septic cases following abortion, which were not reported as puerperal fever. Of these patients 9 died.

The length of stay in the hospital of the patients was as follows:—

	Recoveries.	Deaths.
From 1 to 10 days	3	8
„ 10 to 20 „	16	1
„ 20 to 30 „	9	—
„ 30 to 40 „	6	—
Over 40 days ...	3	—
Total	37	9

MIDWIVES ACT.

During the year under review there were 263 Midwives who signified their intention to practise midwifery, but at the end of the year 32 of these had discontinued their work as midwives, leaving 231 on the roll.

Of the 32 mentioned above, 8 left the district, 3 died, 9 were only temporarily employed here, 4 gave up practice, 3 were struck off the Midwives' Roll, and 5 retired.

Twenty-three midwives have received training out of the 263, but only 15 are in regular practice as midwives. Of the 263 midwives who notified their intention to practise, 4 were midwives who had newly come to the district to practise on their own account.

The midwives attended 11,500 births.

The total number of births registered in the City was 22,168, so that the midwives attended 50 per cent. of the births in the City area.

During the year 952 reports were received from midwives who had advised medical assistance. as required under the Rules of the Central Midwives' Board. The reasons why midwives had to call in medical assistance during 1912 are set out in the table below:—

Delayed or difficult labour	232	Skin eruptions	11
Ophthalmia	139	Injury to child	4
Lacerated perineum	80	Twins	4
Abnormal presentation	73	Cleft palate and hare-lip	2
Debility of child	71	Tongue-tied	1
Hæmorrhage	63	Stillbirths	4
Retained or adherent placenta	63	Cyanosis	3
High temperature	56	Hysteria	1
Premature birth	34	Scarlet fever	1
Deformed child	20	Prolapse of uterus	3
Prolapse of funis	18	Dropsy	3
Unsatisfactory progress	14	Inflamed breast	1
Abortion	12	Pneumonia	1
Bronchitis	12	Thrombosis of vulva	1
Abscess in groin	1	Excessive sickness	3
Eclampsia	2	Offensive lochia	2
Convulsions	6	Anæmia	1
Abdominal pain	9	Influenza	1

In forty-six instances the Midwives reported the death of the infant before the arrival of a medical man, and in 11 instances midwives reported cases where they had laid out a dead body.

During the year the following breaches of the Act or rules have been dealt with by the Public Health and Housing Committee:—

June 14th.—Midwife No. 20,574. Charged with neglect of the rules. (Warned by Committee.)

June 14th.—Midwife No. 826. Charged with neglect of the rules in case of ophthalmia. (Warned by Committee.)

July 12th.—Midwife No. 20,574 again appeared before the Committee, charged with persistent neglect of the rules. The Committee decided to report this midwife to the Central Midwives' Board, and later her certificate was cancelled.

July 26th.—Midwife No. 4,925. Charged with neglect of the rules in case of ophthalmia (a case in which the child's sight was much damaged). The Committee decided to report facts to the Central Midwives' Board, and later her certificate was cancelled.

Eighteen midwives were suspended during the year for the following causes:—

(*a*) The occurrence of puerperal fever in fourteen instances.

(*b*) The midwife herself suffering from septic ulceration of the leg in one instance.

(*c*) The midwife living in a house where there was an infectious disease in two instances.

(*d*) The midwife herself suffering with poisoned hand in one instance.

There were 322 stillbirths reported by midwives. Each of these cases was visited and the results found at examination were as follows:—

Condition of Child and Presentation.	Total Still-births.	Period of Gestation.				
		Full Time.	8 months.	7 months.	6 months.	Under 6 months.
Macerated	146	67	31	29	17	2
Not macerated	176	93	27	31	18	7
Vertex	187	104	36	27	15	5
Breech	50	26	8	9	5	2
Footling	25	10	3	8	3	1
Transverse	4	2	0	2	0	0
No information	56	18	11	14	12	1

OPHTHALMIA NEONATORUM.

Since the passing of the Midwives Act midwives have had to report cases of inflammation of the eyes in newly-born children, and as a result of this it has been possible to insist upon treatment. In cases where a medical practitioner was in attendance it was assumed that treatment would be prompt and effective, and of these cases no report was made, and the results for the year were not known.

On May 11th, 1911, ophthalmia neonatorum was added to the list of diseases, which every doctor and the parent of every child suffering from the disease have to notify, so that the year 1912 is the first complete year of compulsory notification.

There were 220 cases of the disease notified. Of these 83 were reported by doctors in private practice, 121 by doctors at the Eye Hospital, 11 by medical men at the Maternity Hospital, and 5 by medical men at the Queen's Hospital. A large percentage of these cases were reported by midwives before the patient was taken to a medical man, who subsequently reported it as required by the Act.

The disease is one which usually yields quickly to efficient treatment. The main difficulty occurs in mistaking the disease and not applying for treatment until so much damage has been done that the eye never recovers.

Careful enquiry was made in each case as to the after condition of the patient, with the following results:—

1.	Cured, no opacity in either eye	185	patients.
2.	One eye with some opacity	7	„
3.	Both eyes with some opacity, but some vision left	5	„
4.	Both eyes blind	1	„
5.	Not ascertained	13	„
6.	Died of intercurrent disease	9	„

The infant who became totally blind as the result of the ophthalmia neonatorum was attended by a doctor. The disease appears to have commenced on the second day of life, and the child was sent on the sixth day to the Eye Hospital. This proved to be too late for any treatment to be of avail. This case illustrates the promptitude with which such cases require to be treated.

Of the babies born during the year one in every 100 suffered from ophthalmia neonatorum. It will be noted above what a large part the Eye Hospital has played in the treatment of this disease, and how very useful it is to have the services of the specialists at that institution available for these cases. There were 143 patients treated at this Hospital, and of these it was only necessary to keep two as in-patients.

CONTAGIOUS DISEASES OF ANIMALS.

The following report has been prepared by Mr. John Malcolm, F.R.C.V.S., Veterinary Superintendent:—

HOLLIDAY STREET WHARF,

June 30th, 1913.

GENTLEMEN,

I have pleasure in submitting herewith a short report on the occurrence of some of the chief scheduled contagious diseases in animals here during the year 1912.

Glanders and Farcy.—There were two cases of Glanders in the City last year. One of these was in a horse standing in a stable where there was an outbreak in 1911. The other occurred in a horse recently purchased from outside the City, and which was unquestionably affected prior to purchase.

Four other suspected cases were reported, but on examination proved not to be affected. As compared with these two cases certified in 1912, there were nine cases in 1911, ten in 1910, three in 1909 and 100 in 1908. On December 31st there was no suspicion of any horse in the City being affected, but while the London and district authorities fail to eradicate Glanders, Birmingham is liable to an imported case any day. The Board of Agriculture returns show that Glanders is gradually being eradicated in the country :—

In 1909 there were 533 outbreaks, in which 1,753 animals were attacked.
1910 „ 355 „ 1,022 „
1911 „ 208 „ 501 „
1912 „ 173 „ 314 „

Anthrax.—Twelve suspected cases of Anthrax were reported, but on examination none proved to be affected.

As compared with this there were four proved cases in 1911.

Anthrax in the country generally seems to be on the decrease. This is shown by the Board of Agriculture returns as follows :—

In 1910 there were 1,496 outbreaks and 1,776 animals were attacked.
1911 „ 907 „ 1,120 „
1912 „ 743 „ 480 „

The history of these cases so far as is available continues to show that the majority were due to infection by imported foods. This being the case, one wonders why equally stringent regulations should not be enforced for the prevention of Anthrax of foreign origin as are in force for the prevention of Anthrax of indigenous origin.

Foot and Mouth Disease.—During the year there were 83 outbreaks of Foot and Mouth Disease, affecting 645 animals, in Great Britain. Fortunately none occurred in Birmingham although several cases were certified in the Midland Counties. These outbreaks gave rise to much anxiety, and as a consequence much extra inspection of stock in the City. In several instances symptoms highly suspicious of the disease were observed, but examination proved the lesions to be due to other causes than Foot and Mouth disease. The total suppression of these outbreaks go to show the thoroughness with which the Board of Agriculture carried out their Foot and Mouth disease regulations.

Rabies.—A number of dogs have been submitted during the past year as suspected of being affected with Rabies, but on examination no really suspicious case was observed.

Swine Fever.—During the year 133 dead pigs were submitted for examination. Of these 19 presented symptoms more or less suspicious of Swine Fever and 12 were certified by the Board of Agriculture as being infected. Subsequently the animals in contact with these 12 cases were slaughtered and a number of them proved to be infected. As in former years, most of the cases occurring in Birmingham were traceable to the movement of infected pigs into the City.

Swine Erysipelas and Contagious Pneumonia.—A number of cases of Swine Erysipelas and Contagious Pneumonia have again been met with, but while these affections are contagious, they are not scheduled by the Board of Agriculture, although, strictly speaking, they should be scheduled under contagious diseases.

Parasitic Mange in Horses.—Last year there were 63 outbreaks and 109 cases of this disease, against 55 cases for the preceding year, and 134 in 1910. The continued prevalence of this disease seems to imply that the regulations are not sufficiently effective in eradicating it. This no doubt is partly due to the lack of provisions for the general inspection of horses in stables in the City. The serious loss to owners from this disease is evident from the fact that the cured cases, besides the cost of treatment entailed, lose on an average 25 days' work. In addition, five horses were slaughtered as being not worth the cost of treatment.

JNO. MALCOLM,
Veterinary Surgeon.

DISINFECTION.

The following table shows the number of houses and of articles of clothing disinfected during each of the past five years. It must be remembered that the figures for 1912 relate to the extended City, while those for previous years relate to the old City.

	1907	1908	1909	1910	1911	1912
Houses disinfected after Small-pox	0	0	0	0	1	0
,, ,, ,, Puerperal Fever...	33	12	19	25	23	78
,, ,, ,, Scarlet Fever	2,258	2,102	2,659	2,585	2,259	5,014
,, ,, ,, Diphtheria	972	735	730	607	623	777
,, ,, ,, Enteric Fever	217	167	102	90	109	103
,, ,, ,, Tuberculosis	692	724	650	740	1,041	1,690
Beds and Mattresses disinfected ...	8,072	7,776	7,285	7,767	7,522	13,319
Sheets, Blankets and Counterpanes disinfected	12,442	11,837	10,599	11,698	11,723	20,030
Pillows and Bolsters disinfected ...	8,972	8,091	8,728	9,816	9,311	17,475
Garments disinfected	10,310	11,251	8,381	12,528	13,702	19,962
Carpets disinfected	2,858	2,398	1,911	1,985	1,786	3,560
Other Articles disinfected	10,438	9,369	6,523	7,809	7,995	12,154

Since the extension of the City the work of disinfecting articles of clothing has been carried on at three centres: (1) at Bacchus Road; (2) at Chester Street, Aston; and (3) at West Heath Hospital. The two latter places are extremely objectionable from the point of view of efficient disinfection. The building at Aston is small and inefficient, and situated in the destructor yard, while the disinfector at West Heath Hospital is situated within the precincts of an infectious hospital building. There is a good deal of objection to allowing clothing, say, from a house where Diphtheria exists, to be taken to a hospital where mainly Scarlet Fever infection exists; but, in addition to both of them being quite improper buildings to use for the purpose, they are unsuitably placed for economically carrying on the work. At the present time nearly every van load which is taken to West Heath has to be carted several miles further than it ought to be by reason of the bad situation of the disinfecting station. But for the desire to prevent any additional capital expenditure being incurred, the Public Health and Housing Committee would have taken into consideration the desirability of providing a disinfecting station for the south side of the City on a proper scale.

Much of the clothing which is received at the Disinfecting Station comes from the poorest class of houses, and is dirty when received, with a result that the process of steam disinfection fixes many of the stains in the clothing, and makes it impossible for the owners to wash them out. Such substances as milk, urine, tea, or similar organic fluids, if spilled upon a clean sheet, and then disinfected in a steam disinfecting apparatus, will cause a more or less permanent stain to be produced.

A good deal of time was spent during the year in experiments with a method of dealing with such articles without fixing the stains, and Drs. Higgins and Dale have proved that by putting the articles into a warm chamber in which a vacuum is produced, it is possible to kill with moist formalin vapour all ordinary infections quite effectively. An apparatus for this purpose has been fixed at the Bacchus Road Disinfecting Station, and is working quite efficiently. If a new station were provided it would be desirable that a laundry should be erected, so that clothing might be first of all washed and dried, then disinfected, mangled, and returned in a reasonably clean condition.

CITY HOSPITALS.

The following statement shows the number of patients* treated last year in the City hospitals :—

	Scarlet Fever.	Diphtheria.	Enteric Fever.
Under treatment at beginning of year ...	457 ...	43 ...	10
Admitted during the year	4,327 ...	509 ...	19
Discharged during the year	3,958 ...	471 ...	26
Died during the year	132 ...	52 ...	3
Remaining at end of year	694 ...	29 ...	—

*In a certain number of cases the diagnosis was revised in hospital.

A good many of the notified cases of Enteric Fever were treated in the General Hospitals of the City; also a few of the cases of Diphtheria.

The following are the reports on the different hospitals:—

REPORT ON LITTLE BROMWICH HOSPITAL.

City Hospital,
Little Bromwich.

Gentlemen,

I beg to submit a report on the hospital for the year ending December 31st, 1912.

Structural Alterations.

A second (emergency) door with "panic bolts" has been fitted in each of the maids' dormitories. This alteration was made to provide an emergency exit in case of fire. Before this was done there used to be only one door for both entrance and exit from the maids' dormitories; the maids sleeping at the end of the dormitory where there was no exit would have had difficulty in getting out; now, however, an exit door has been put in at the far end of each passage, so that there can be no difficulty of the sort now.

Statistics.

Number remaining in hospital December 31st, 1911	290
Number admitted during the year 1912	2,749
Total under treatment during the year 1912	3,039
Discharged during the year 1912	2,495
Died during the year	92
Remaining in hospital December 31st, 1912	452
	3,039

The average duration of stay in hospital was 53·4 days. This is much less than the average for the preceding year, which was 65·1 days. The difference, however, is in great measure due to the fact that during the latter half of 1912 the uncomplicated cases of Scarlet Fever have been kept a shorter time in hospital on account of the heavy pressure of cases in the recent large outbreak of Scarlet Fever in Birmingham. In the case of complicated Scarlet Fever cases, however, having, for example, chronic ear or nose discharges, these have been detained as far as possible until thoroughly clear of the said discharges before being sent home. No patient with a discharge from ear or nose has been sent home except at the request of the parents and after due consultation with them as to the method of after treatment of these discharges.

Percentage Case Mortality Rate.

The number of deaths, 92, gives a case mortality rate of 3 per cent., as against 3·2 per cent. for the year 1911, based on the number of admissions. Eight of the deaths were of patients who did not have Scarlet Fever, and were due to Measles (3), Broncho-Pneumonia (1), Measles and Laryngeal Oedema (1), Broncho-Pneumonia and Meningitis (1), Marasmus and Purpura Hæmorrhagica (1), and Diphtheria (1). If these cases be deducted, the mortality rate becomes 2·7 per cent. Further, six of the fatal cases were those of patients suffering from malignant Scarlet Fever, and three of the other fatal cases were on admission to hospital complicated by diseases other than Scarlet Fever, namely: one Scarlet Fever and Pneumonia, one Scarlet Fever and Diphtheria, and one Scarlet Fever complicated by Heart Disease. All these latter nine were cases who died within 48 hours of admission to hospital. The resulting mortality rate on deducting these is 2·4 per cent., as against 2·3 per cent. last year.

Complications.

The complications arising in the cases treated during the year are shown in the following table:—

Rhinorrhœa	460	Nephritis	24
Adenitis	616	Pneumonia	20
Otorrhœa	367	Meningitis	2
Albuminuria	245	Conjunctivitis	23
Rheumatism	50	Appendicitis	2
Secondary Tonsillitis	23	Jaundice	1
Abscess	64	Pleurisy	5
Bronchitis	5	Pericarditis	1
Endocarditis	4	Empyema	1
Cancrum Oris	1		

During the year there were 10 cases of secondary Scarlet Fever, that is, patients suffering from Scarlet Fever and developing a second attack of the same disease while convalescing from the primary illness. In one case a patient developed a third attack of Scarlet Fever, and in another case a fourth attack. The secondary cases have been on the whole of a mild type, the primary attack in all of them being more or less severe, and in none of these secondary cases was there a fatal result.

Complications Present on Admission.

Of those patients who suffered from complications while in the hospital, as enumerated in the preceding table, a certain number were admitted suffering from one or more of these complications at the time of admission. The most frequent conditions so existing are shown in the following table :—

207 cases were admitted suffering from Rhinorrhœa.
411 ,, ,, ,, ,, Adenitis.
49 ,, ,, ,, ,, Otorrhœa.
102 ,, ,, ,, ,, Albuminuria.
3 ,, ,, ,, ,, Rheumatism.
3 ,, ,, ,, ,, Nephritis.
7 ,, ,, ,, ,, Pneumonia.
1 case was ,, ,, ,, Empyema.

Corrected Diagnosis.

During the year 292 cases who had been certified to be suffering from scarlet fever were found. on admission to hospital, not to be suffering from scarlet fever, but from some other condition. An analysis of these cases is given in the following table :—

Corrected Diagnosis.	No. of Cases.	Contracted Scarlet Fever in Hospital.	Died.
Tonsillitis	91	21	—
German Measles	50	18	—
Urticaria	5	1	—
Whooping Cough	1	—	—
Impetigo	3	—	—
Gastritis	1	—	—
Dermatitis	1	—	—
Perimetritis	1	—	—
Pneumonia	3	—	2
Marasmus	3	—	1
Eczema	1	1	—
Vaccinta	1	—	—
Septic Rash	2	1	—
Ringworm	1	—	—
Dentition	1	—	—
Phthisis	1	—	—
Chicken Pox	2	—	—
Scabies	1	—	—
Erythema	4	—	—
Flea Bite Rash	3	—	—
Measles	11	1	4
Toxic Rash	1	—	—
Ichthyosis	1	—	—
Desquamation (after poultices)	1	—	—
Roughness of Skin	1	—	—
Catarrh	1	—	—
Diphtheria	1	—	1
Stomatitis	1	—	—
Chronic Tonsillitis and German Measles	1	—	—
German Measles and Flea Bite Rash	1	—	—
Constipation	1	—	—
	197	43	8
No definite disease	95	18	0
	292	61	8

Of the cases tabulated above 61 developed Scarlet Fever in hospital, as of course they very often do; this necessitates in their cases a much longer stay in hospital than the cases admitted actually suffering from Scarlet Fever.

In addition to the above list of corrected diagnosis, many patients have been admitted suffering from scarlet fever in addition to some other infectious disease. The chief co-existing infectious diseases were diphtheria, chicken pox, and whooping cough, and the respective numbers of these cases are shown below :—

Scarlet Fever +Diphtheria 91
,, +Chicken Pox 19
,, +Whooping Cough ... 9

CROSS INFECTION.

There have been during the year 1912 a considerable number of cases of cross infection. By cross infection is meant the introduction into a ward of infectious diseases other than the particular disease which is being treated in that ward. Various infectious diseases are continually making their appearance in Scarlet Fever wards without any cause which can be traced. The chief methods of introduction, however, are: (1) Patients admitted suffering from diseases other than Scarlet Fever; (2) patients admitted from houses where other diseases exist while not themselves actually at the time showing any signs of these diseases; (3) introduction of toys, books, etc., from such houses as mentioned in (2). Every effort is made to prevent the introduction of cross infection. Patients suffering from infectious diseases other than Scarlet Fever are isolated on admission, and all patients coming from infected houses are isolated. The ambulance nurse always makes strict enquiries whether any other infectious disease is in the house, but often the existence of such is ignored or denied, and it is not until the patient develops some infectious disease after admission that we know or suspect that he has been previously exposed to other infection. No second-hand books, toys, etc., are admitted into the wards, and all articles are disinfected before being delivered to the patients.

The best way to avoid cross infection is to isolate each patient for three weeks to give time for any second disease to show itself. A certain number of patients are admitted not suffering from any disease whatsoever, and if these could be so isolated as above, it would be of great advantage, as frequently they are the sources of cross infection (even if they are not the sources of cross infection, it may happen that they are not suffering from Scarlet Fever, and this would considerably lessen their chances of contracting it). When a patient develops some other infection, the patients on either side of him are generally the ones who develop it next after the incubation period is over, that is if any of his fellow patients develop it at all. If those two "contacts" could be isolated at once, this would to a great extent prevent the further spread of cross infection in the ward. These last precautions can only be properly taken where there is accommodation for "cubicle" system of nursing.

UNCLEAN HEADS.

During the year 1,706 patients with unclean heads were admitted, about 62 per cent. of the total number of cases admitted. Of these patients 1,127 were females and 579 were males. A good deal of time and energy is expended by the nurses in dealing with this condition.

BACTERIOLOGICAL EXAMINATION.

During the year 1912 the systematic practice of examining swabs taken from the throat and nose of every patient on admission and from the nose on discharge was discontinued, and examination was made of swabs taken from "dirty" throats only.

The results of these examinations are:—

Throat Positive	156
Throat Negative	324
Number of swabs examined	480

HEALTH OF STAFF.

The health of the staff has not been very good for the year 1912 on comparing the figures with those of 1911. There were numerous cases of Scarlet Fever and Diphtheria. These almost entirely consisted of maids and nurses who were newcomers just about to commence Fever nursing for the first time. These nearly always develop sore throats, and in some cases Scarlet Fever or Diphtheria. All the sick staff, however, with one exception, did well; the exception was a probationer who had only been a few weeks in the hospital. She developed a very septic type of Scarlet Fever and died after a short illness.

The number of staff who were taken off duty on account of illness and the duration of illness are shown below:—

18 Nurses with	Scarlet Fever	599	days off duty.
5 ,, ,,	Diphtheria	158	,,
14 ,, ,,	Tonsillitis	147	,,
4 ,, ,,	Rheumatism	94	,,
5 ,, ,,	Various minor illnesses	70	,,
2 ,, ,,	Influenza	18	,,
3 ,, ,,	German Measles	43	,,
1 Laundress,,	German Measles	9	,,
1 Maid ,,	Scabies	31	,,
5 Maids ,,	Tonsillitis	63	,,
2 ,, ,,	Various minor illnesses	25	,,
		1,257	,,

In conclusion, I wish to add that I am indebted to Dr. Clifford Beards for most of the figures of this report. Dr. Beards having been appointed Assistant Medical Officer of Health, resigned his post as Medical Superintendent of this hospital on November 30th, and it is therefore entirely upon the records kept by him until that date that this report is founded.

I am, Gentlemen,

Your obedient servant,

DOUGLAS M. SPRING,

Medical Superintendent.

REPORT ON LODGE ROAD HOSPITAL.

City Hospital,
Lodge Road.

Gentlemen,

I beg to present to you the following report on the working of this hospital for the year ended 31st December, 1912.

The total number of patients receiving treatment during the year amounted to 1,745, an increase of 832 on the number of the previous year. The increase was due mainly to the greater number of Scarlet Fever patients admitted.

111 patients remained in hospital from 1911.

Of the total 1,472 were discharged cured, 82 died, and 191 remained in hospital at the close of the year.

The figures are given in the table below:—

Disease.	Remaining 31st Dec., 1911.	Admitted during 1912.	Total under Treatment.	Discharged during 1912.	Died 1912.	Per-centage Mortality on total.	Remaining 31st Dec., 1912.
Typhoid Fever ...	10	19	29	26	3	10·3	—
Diphtheria	26	452	478	396	48	10·0	34
Scarlet Fever ...	75	1163	1238	1050	31	2·5	157
Total	111	1634	1745	1472	82	4·7	191

Typhoid Fever.

19 cases of Typhoid Fever were admitted during the year.

The following table shows the admissions and deaths for 1912, arranged according to age and sex:—

Ages.	Males.		Females.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
10—15 years	—	—	1	—	1	—
15—20 „	2	—	—	—	2	—
20—25 „	2	—	—	—	2	—
25—35 „	6	2	4	—	10	2
35—45 „	1	1	1	—	2	1
45—60 „	1	—	1	—	2	—
Total...	12	3	7	—	19	3

The percentage mortality on the total number treated was 10·3, which is quite low.

The three cases ending fatally were true Typhoid, death occurring on the 6th, 7th, and 9th days respectively of admission into hospital.

A revision of diagnosis was made in five cases .—

Pleurisy	2
Salpingitis	1
Septicæmia	1
Acute Nephritis	1

13 cases gave a positive blood reaction (+ Widal).

The average stay in hospital of the patients that recovered was 44 days; of those that died 7 days.

Two nurses contracted the disease in the hospital, and recovered.

DIPHTHERIA.

There were 78 more admissions during 1912 than in the previous year.

The percentage mortality based on the number treated during the year and admitted as Diphtheria is 10·0.

The next table shows the Admissions and Deaths during 1912, arranged according to age and sex ;—

AGES.	MALES.		FEMALES.		TOTAL.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Under 1 year	3	2	2	—	5	2
1— 2 years	14	1	8	3	22	4
2— 3 „	16	1	14	4	30	5
3— 4 „	21	7	15	4	36	11
4— 5 „	20	4	20	1	40	5
5—10 „	70	9	65	7	135	16
10—15 „	25	—	41	2	66	2
15—20 „	18	—	30	—	48	—
20—25 „	8	—	18	—	26	—
25—35 „	9	—	23	1	32	1
35—45 „	4	—	4	—	8	—
45—60 „	3	1	—	—	3	1
Over 60 „	—	—	1	1	1	1
Total	211	25	241	23	452	48

Tracheotomy was performed in 21 cases, 11 of which died, giving a percentage mortality of 52. The average length of life in hospital of the 11 that died was 48 hours. This gives an idea of the great severity of the attacks, and hence the high mortality.

The following table shows the relation of deaths and recoveries to the duration of illness previous to admission of cases of true Diphtheria.

DAYS.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15 to 30	Tot'l
Deaths	3	6	9	5	4	4	4	—	2	—	1	—	—	1	—	3	42
Recoveries ...	9	41	53	46	40	20	14	4	5	6	3	—	—	—	—	6	247
Mortality, per cent.	25	12·8	14·5	9·8	9·1	16·6	22·2	0·0	28·5	0·0	25	—	—	100	—	33·3	—

All patients notified as Diphtheria, with the exception of 99, were treated with antitoxic serum. 20 cases received serum before admission, but in a large majority of these further doses were necessary.

The total quantity of serum given during 1912 was 2,804,000 units, that is, an average of 8,000 units per patient receiving this form of treatment.

A revision of diagnosis was made in 165 cases, or 36·5 per cent., of the patients admitted as Diphtheria.

All forms of Tonsillitis	126
Scarlet Fever	15
Measles	4
German Measles	1
Enteric Fever	2
Whooping Cough	1
No disease	7
Broncho-Pneumonia	5
Other diseases	4
Total	165

The average duration of stay in hospital of Diphtheria patients that recovered was 31·1 days ; of those that died 8·4 days.

The following list shows the number of cases in which an additional infectious disease was present on admission :—

Additional Disease.

Diphtheria +Scarlet Fever	8
,, +Measles	6

Additional diseases contracted in hospital :—

Contracted.

Diphtheria +Scarlet Fever	2
,, +Measles	2
,, +Chicken Pox	1

SCARLET FEVER.

1,163 patients were admitted in 1912, an increase of 747 on the number of the previous year The mortality based on the number of cases treated was 2·5 per cent.

AGES.	MALES.		FEMALES.		TOTAL.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Under 1 year	1	—	6	1	7	1
1— 2 years	22	1	13	4	35	5
2— 3 ,, ...	32	—	34	4	66	4
3— 4 ,, ...	36	1	39	3	75	4
4— 5 ,, ...	66	1	60	1	126	2
5—10 ,, ...	253	3	260	5	513	8
10—15 ,, ...	106	1	109	—	215	1
15—20 ,, ...	27	1	29	—	56	1
20—25 ,, ...	9	—	20	—	29	—
25—35 ,, ...	10	—	18	1	28	1
35—45 ,, ...	3	1	7	—	10	1
45—55 ,, ...	1	—	2	—	3	—
Total	566	9	597	19	1163	28

The average duration of stay in hospital of Scarlet Fever patients who recovered was 43·1 days ; of those who died 4·1 days.

The diagnosis was revised in 138 cases, as follows :—

No apparent disease	60
Simple Erythema	47
Tonsillitis	11
Diphtheria	3
Measles	4
German Measles	11
Other diseases	2
Total	138

The list below shows the number of cases with an additional infectious disease on admission :—

Scarlet Fever +Diphtheria ...	5
,, +Measles ...	1
,, +German Measles	1
,, +Phthisis Pulmonalis	2
,, +Ringworm ...	13

The following list gives the number of cases contracting a second disease in hospital :—

Scarlet Fever +Chicken Pox	15
,, +Diphtheria ...	5
,, +Measles ...	3
, +German Measles	1
,, +Ringworm ...	1

22 patients admitted as Scarlet Fever developed it in hospital.

Below are shown various complications present amongst Scarlet Fever patients on admission :—

Rhinitis	112	Conjunctivitis	3
Otitis	19	Impetigo	5
Albuminuria	11	Psoriasis...	3
Rheumatism	2		

Another list showing complications occurring among Scarlet Fever patients after admission :—

Rhinitis	442	Rheumatism	30
Otitis	146	Vaginitis	10
Albuminuria	179	Endo. and Pericarditis	1
Nephritis	26	Osteomyelitis	1
Uræmia	1	Pneumonia	6
Conjunctivitis	57	Urticaria	6
Abscess	78	Mastitis	2
Mastoid Abscess	5		

The open air treatment of Scarlet Fever has been further tried in all severe cases whenever possible with the available accommodation with excellent results.

Health of the Staff.

The following list shows the employment, disease, and duration of illness of members of the staff off duty during 1912 :—

	Employment.	Disease.	Total days. off duty.
3	Medical Superintendent (Dr. Cargin)	Diphtheria ...	41
	Asst. Medical Officer (Dr. Mitchell)	Scarlet Fever	44
	,, (Dr Shand)	Rheumatism	11
	,, ,,	Tonsillar Abscess ...	6

	Nurses.	Maids.		
	5	—	Scarlet Fever	233
	—	3	Diphtheria ...	128
	2	—	Enteric Fever	148
	1	—	Measles	18
	1	—	German Measles	7
	7	1	Tonsillitis ...	44
	2	—	Rheumatism	21
	1	...	Bronchitis ...	19
	1	—	Facial Abscess	30
	1	—	Scald (Foot)	44
	2	—	Laryngitis ...	22
	10	8	Minor maladies	88
3	33	12		904 days.

Works.

The repairing of the roads in the hospital is well ahead and promises to be a great improvement.

A new copper sterilizer has been installed in the kitchen of Ward F for the purpose of sterilizing all eating utensils from the ward. The idea is to prevent or lessen cross infection, and the spread of undesirable complications from one patient to another. Results have proved very satisfactory, so much so that it is recommended that each ward be supplied with a sterilizer of a similar kind.

In conclusion, I beg to state that the figures in this report have been arrived at from Dr. Cargin's records, as I was appointed late in the year 1912, taking up duties on 6th December, 1912.

I am, Gentlemen,

Your obedient servant,

Henry Whitehead,

Medical Superintendent.

REPORT ON WITTON HOSPITAL.

City Hospital,
Witton.

Gentlemen,

The following is a report on the working of the Infectious Diseases Hospital, Witton, compiled from material left by Dr. T. G. Shand (the late Medical Superintendent). This hospital was only utilised for the treatment of Scarlet Fever during the first half of the year 1912. Owing to the falling off in the disease the hospital was closed on July 24th, 1912, the patients, who were all convalescent at that time, being transferred to one of the other City hospitals.

Scarlet Fever.

At the beginning of the year 1912 there remained 57 patients in hospital from the previous year.

226 were admitted during the year, making the total patients under treatment 283.

Amongst these there were 7 deaths, giving a percentage mortality of 2·5 for those under treatment, or 3·1 per cent. for those admitted.

The following table shows the Scarlet Fever admissions and deaths during 1911 divided according to age and sex :—

AGES.	MALES.		FEMALES.		TOTAL.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Under 1 year	1	1	1	—	2	1
1— 2 years	2	—	1	—	3	—
2— 3 ,, ...	5	1	7	1	12	2
3— 4 ,, ...	11	1	16	—	27	1
4— 5 ,, ...	11	—	12	—	23	—
5—10 ,, ...	46	1	52	2	98	3
10—15 ,, ...	20	—	21	—	41	—
15—20 ,, ...	4	—	6	—	10	—
20—25 ,, ...	2	—	3	—	5	—

The diagnosis was revised in the case of 40 patients who were not suffering from Scarlet Fever on admission ; 13 of these contracted the disease later.

The average duration of stay of the patients who recovered was 48 days, and of those who died 15 days.

The number of cases in which two diseases were co-existent at the time of admission is as follows :—

Disease.	Co-existent Disease.	Number.
Scarlet Fever	+Burns	3
,,	+Ringworm	3
,,	+Impetigo Contagiosa ...	2
,,	+Psoriasis	1
,,	+Whooping Cough	1
,,	+Chicken Pox	1
,,	+Rubella	1
,,	+Diphtheria	1
,,	+Broncho-Pneumonia	1
,,	+Meningitis	1
,,	+Goitre	1

The number of cases in which a second disease was contracted in hospital is shown below :—

Disease.	Developed in Hospital.	Number.
Scarlet Fever	Chicken Pox	8
,,	Rubella	5
,,	Ringworm	2
,,	Whooping Cough ...	1

The following figures indicate the complications which were present amongst the Scarlet Fever patients on admission :—

Complications.	Number.
Rhinitis	12
Otitis	1
Rheumatism	1

The next table gives the complications occurring amongst the Scarlet Fever patients after admission :—

Complications.	Number.	Complications.	Number.
Rhinitis	117	Onychia	18
Sores on face or body	27	Abscesses	11
Otitis	29	Rheumatism	14
Albuminuria	22	Skin Diseases	10
Nephritis	2	Conjunctivitis	7

A considerable proportion of the patients were treated by the "open-air method" from the day of their admission until they were sufficiently recovered to walk about.

The plan adopted was to have the bed and patient carried outside and placed in the grounds adjoining the wards, or where this was not possible, the patients wrapped in blankets were placed upon couches, stretchers or improvised beds in the hospital grounds. These patients remained outside during the entire day, being fed and attended to by the nurses, and in many cases it seemed as though this treatment was responsible for the recovery of the patient.

Autogenous vaccines were also administered in a number of cases, both during the early stages of the disease and later in the long continued discharges so commonly found in Scarlet Fever.

In the former cases this method was often successful, but in the more or less chronic stages the results did not justify its adoption as a routine treatment.

H. M. CARGIN, M.D., D.P.H.,
For the Medical Superintendent.

REPORT ON WEST HEATH HOSPITAL.

I beg to submit tabular statements of the work done at this hospital during 1912. The information has been obtained from the hospital record books as entered up by my predecessor, the late Dr. Cusack.

Table I.

Showing the age and sex incidence amongst 188 *cases of Scarlet Fever completed during* 1912.

Ages.	Cases Treated.		Deaths.		Totals.	
	Males.	Females.	Males.	Females.	Cases.	Deaths.
Under 1 year	1	—	—	—	1	—
1 year and under 2 years ...	2	—	—	—	2	—
2 years ,, 3 ,, ...	8	5	—	—	13	—
3 ,, ,, 4 ,, ...	8	3	—	—	11	—
4 ,, ,, 5 ,, ...	8	9	—	1	17	1
Totals under 5 years	27	17	—	1	44	1
5 years and under 10 years ...	38	44	1	1	82	2
10 ,, ,, 15 ,, ...	13	26	1	—	39	1
15 ,, ,, 20 ,, ...	5	4	—	—	9	—
20 ,, ,, 25 ,, ...	—	3	—	—	3	—
25 ,, ,, 30 ,, ...	—	4	—	—	4	—
30 ,, ,, 35 ,, ...	2	1	—	—	3	—
35 years and over	1	3	—	—	4	—
Totals	86	102	2	2	188	4

Table II.

Showing age and sex incidence of complications amongst 188 *cases of Scarlet Fever completed during* 1912.

	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and over.	Totals as to Complications.
Rhinitis	1	3	5	7	5	19	6	2	—	—	48
Adenitis	1	2	2	8	8	11	4	2	1	—	39
Otitis	—	2	1	2	3	4	—	—	—	1	13
Albuminuria	—	—	2	2	1	2	6	1	3	—	17
Arthritis...	—	—	—	3	2	8	5	—	2	—	20
Secondary Throat ...	—	—	—	1	1	3	3	—	1	—	9
Nephritis	—	—	—	—	—	3	—	—	—	—	3
Relapse	—	—	—	—	2	4	1	—	1	—	8
Totals	2	7	10	23	22	54	25	5	8	1	157

Table III.

Showing age and sex incidence amongst 78 *cases of Diphtheria completed in* 1912.

Ages.	Cases Treated.		Deaths.		Totals as to Age.	
	Males.	Females.	Males.	Females.	Cases.	Deaths.
Under 1 year	—	—	—	—	—	—
1 year and under 2 years ...	—	—	—	—	—	—
2 years and under 3 ,, ...	1	1	—	—	2	—
3 ,, ,, 4 ,, ...	2	1	1	—	3	1
4 ,, ,, 5 ,, ...	3	6	—	—	9	—
Total cases under 5 years	6	8	1	—	14	1
5 years and under 10 years ...	16	25	2	1	41	3
10 ,, , 15 ,, ...	3	11	—	—	14	—
15 ,, ,, 20 ,, ...	—	2	—	—	2	—
20 ,, ,, 25 ,, ...	—	5	—	—	5	—
25 ,, ,, 30 ,, ...	—	2	—	—	2	—
Totals	25	53	3	1	78	4

Death-rate per cent., 5·1.

TABLE IV.

Showing age and sex incidence of 169 *cases of Phthisis completed during* 1912.

AGES.	CASES TREATED.		DEATHS.		TOTALS AS TO AGE.	
	Males.	Females.	Males.	Females.	Cases.	Deaths.
Under 15 years...	12	6	—	—	18	—
15 years and under 20 years	10	9	—	—	19	—
20 ,, ,, 25 ,,	13	14	—	—	27	—
25 ,, ,, 30 ,,	14	18	1	1	32	2
30 ,, ,, 35 ,,	8	14	—	—	22	—
35 ,, ,, 40 ,,	4	11	—	—	15	—
40 ,, ,, 45 ,,	8	8	—	—	16	—
45 years and over	15	5	—	—	20	—
Totals	84	85	1	1	169	2

In 52 cases a definite family history of Tuberculosis was obtained. Tuberculin was given in 162 cases, and in all but 5 an increase in weight was recorded. The sputum in 7 cases was blood-streaked, whilst in 6 others definite hæmoptysis occurred. In only one of the latter cases, all of whom had Tuberculin, did a loss of weight occur.

The average duration of treatment was 53·6 days.

(*Signed*) ALEX. LEGGAT,
Medical Superintendent.

GENERAL SANITARY WORK.

The City is now divided into four main districts, North-west, North-east, South-west, and South-east, and each of these divisions is for the purpose of sanitary survey sub-divided into two districts. Each sub-district is in charge of a district inspector, who is appointed by reason of his general experience and ability. There are, therefore, eight district inspectors, each of whom has under his control from two to four assistant inspectors. At the time of writing this report there were in all 8 district and 20 assistant inspectors.

The general routine of work is summed up as follows: All the inspectors attend at the office at 8.30 every morning, and from 5 to 5.30 in the afternoon. Interviews with property owners and others may be had with the inspectors between 8.30 and 10 a.m., and between 4.30 and 5.30 p.m. Each district inspector takes the work of the day in his part of the City, and divides it between himself and his assistants in such a way that as little travelling as possible may be necessary. The inspectors for the outlying districts are supplied with season railway tickets, and in a considerable number of cases a bicycle allowance is made on condition that the inspector makes use of his cycle in his work. In this way the time occupied in travelling is reduced, while the whole of the work is supervised from the centre.

The part of the work done by the inspectors in the prevention of infectious disease, other than that done by the health visitors, is supervised by the district assistant medical officers of health, while all the remainder of their work is supervised by the chief sanitary inspector.

With respect to their work in the prevention of infectious diseases, 16,344 visits were paid by the inspectors to dwellings, and in 5,894 cases houses were referred by them to the disinfecting staff for disinfection.

A brief summary of the work done by the general Sanitary Inspectors will be found in the table below :—

No. of visits and revisits paid :—

Infectious Diseases	16,344
Nuisances or Complaints	18,657
Work ordered	18,337
Work in progress	16,914
Inspection of Dirty Courts	1,707
House to House Inspection	8,004
Smoke or Water Tests	1,885
Offensive Trades	308
Ice Cream	1,636
Shop Hours and Seats	8,690
Owners or Agents	3,455
Other Purposes	6,693

Nuisances, etc., reported :—

Houses to be disinfected after Smallpox	—
,, ,, ,, Scarlet Fever	5,014
,, ,, ,, Diphtheria	777
,, ,, ,, Typhoid Fever	103
Repairs to Houses	15,154
Houses to be cleansed	2,017
Houses to be provided with better ventilation	670
Houses to be provided with separate water supply	139
Cases of overcrowding to be remedied	42
Houses to be provided with Damp Courses	1,145
Water to be removed from Cellars	416
Spouting to be repaired or disconnected	6,214
Rain Water Cisterns to be disconnected or abolished	896
Ashpit Privies to be converted to Water Closets	410
Pan Privies to be converted to Water Closets	1,234
Privies and Closets to be limewashed	2,307
Water Closets to be repaired or reconstructed	5,642
Additional Water Closets to be provided	221
Ashplaces to be repaired or limewashed	2,998
Ash Tubs to be provided	4,950
Soilpipes to be repaired or removed	192
Urinals to be put in order or closed	163
Drains to be relaid or repaired	1,669
Drains to be opened and cleansed	5,670
Gully Traps to be provided	2,367
Interception Traps to be provided on main drains	263
Premises to be supplied with additional drains	819
Drains in cellars to be disconnected or abolished	78
Sink Bend Pipes to be repaired or affixed	1,023
Sanitary Sinks to be provided	2,006
Yards to be paved	317
Yards to be repaired	1,721
Courts or Yards to be cleansed by Tenants	314
Wash Houses to be repaired or limewashed	2,273
Keeping of fowls to be discontinued	224
Nuisances from swine and swine styes abated	27
Accumulations of rubbish, manure, etc., to be removed	563
Manure receptacles to be provided or repaired	169
Dangerous premises to be reported to City Surveyor's Department	423
Defective Fittings to be reported to Water Dept.	1,443
Other Work to be done	238

It will be seen that 18,657 visits were paid in connection with complaints and nuisances, followed by 35,251 subsequent visits to see that the work ordered had been commenced and was being properly carried out. The total number of defects dealt with was over 70,000.

Wherever necessary, notices were served for the abatement of the nuisances discovered. For the most part such notices were complied with without recourse being had to legal proceedings, but in 63 instances a summons had to be issued.

Drainage Work.—Great attention has been paid to drainage work during the year, 1,885 smoke tests or water tests being carried out. As many as 1,669 drains were relaid in part or entirely. 263 interception traps were affixed, 2,367 gully traps were provided, and 819 additional drains were put in.

Conversion of Privies.—The work of converting the pan privies into water closets has been steadily proceeded with, 1,234 being converted during the year. There are now comparatively few of these unhealthy conveniences left.

The extension of the City brought within its boundary a larger number of midden privies. All these have been carefully inspected. During the year 410 midden privies chiefly in the more outlying parts of the town were converted to water closets.

Overcrowding.—The table shows that 42 cases of overcrowding were dealt with by the Sanitary Inspectors. This number does not include the very large number of cases discovered by the Health Visitors and remedied without any reference to the inspectors.

Ashplaces.—During the year special attention was paid to the provision for storing ashes and refuse, especially in court yards. It will be seen that 4,950 galvanised iron ashbins were ordered, while 2,998 ashplaces were improved by repairs and limewashing.

Yards and Wash-houses.—Notices were served for 317 yards to be paved and 1,721 to be repaired; while in a large number of cases the tenants were made to cleanse their yards and out-houses. Orders were also given for 2,273 wash-houses to be repaired or limewashed.

Reports to other Departments.—The work of assisting other departments by reporting various matters to them has been maintained, 1,866 reports of dangerous premises or defective fittings being forwarded to the City Surveyor and the Water Department, in addition to a large number of miscellaneous reports sent to various other departments.

Cleansing of Courts.—The staff of Court Cleansers comprises 11 men and a superintendent. Their work includes the cleansing of courts with the out-houses belonging to them, the clearing out of drain traps, limewashing of out-houses, and in certain cases of the houses in which infectious disease has occurred. Towards the cost of this work a sum of £317 was paid by owners of property. The total number of courts cleansed was 16,046, and in the course of this cleansing 11,388 water closets and yard drains were cleared with a plunger.

Inspection of Water Closets.—In addition to the Court Cleansing staff two men are employed to inspect water closets in the poorer districts of the City, and affix notices on the doors cautioning tenants as to the improper use of the closets. These men visited 19,989 yards and examined 65,616 water closets. They found 6,757 with dirty basins, 6,067 with dirty seats, and 21,823 requiring locks, while 2,140 were obstructed and could not be opened with a plunger, and 1,337 were defective, and were reported to the District Inspector.

HOUSING OF THE WORKING CLASSES.

The work of inspection under the Housing Regulations was greatly hindered during 1912 by the District and Assistant Inspectors being required to do other work to such an extent as to prevent them undertaking the inspection of as many houses as was originally intended. The stress of other work which occurred during last year has to a large extent been removed, so that it is now possible for them to devote a proper amount of attention in the various districts to the systematic house inspection required by this Order.

During the year under review 5,555 houses were inspected. For every house an inspection card similar to the one printed below is filled up. On the reverse side of the card space is provided for notes as to future visits to the same house, to be filled in as occasion arises. After being filled up the cards are filed in a card index, for future use.

House Inspection Card.

Situation	Rooms B L	Rent
Cleanliness		
Lighting	Ventilation	B B
Dampness of Walls and Floors		
Plaster	Woodwork	
Brickwork	Cellar	
Food Storage	Water Supply	
Air Space round	Paving	
Drainage	Out-buildings	
Refuse Removal	Closet accommodation	
Any special cause for representing		
Action to be taken now		
Date	Inspector	

Of the 5,555 houses thus visited 880 were represented by me as suitable to be dealt with under the Housing of the Working Classes Acts, while in 4,331 cases one or more insanitary conditions were found, which required attention under the Public Health Act, so that in each case where insanitary conditions were found the house was either dealt with under the Housing of the Working Classes Acts or the Public Health Act. The defects found at these houses and remedied under the Public Health Act are included in the general statement of sanitary work carried out on page 70.

The work done during 1912, under the Housing Acts, was larger in amount and better in quality than in any previous year. This was mainly due to the fact that 1912 was the first year during which the much extended powers given by the Housing, Town Planning, etc., Act, 1909, came fully into operation. This Act amended the procedure under Part II. of the Housing of the Working Classes Act, 1890, in several important directions, with a result that it is now possible to deal with bad housing conditions with very much less difficulty and to obtain work in the remedying of the defective houses of a quality that it was quite impossible to demand before. Several of these important amendments were originally suggested by the Birmingham authorities, and it is particularly gratifying to find how satisfactorily they have been working.

Perhaps the greatest improvement made for dealing with houses under Part II. of the Act of 1890 lies in the setting up of a real local housing authority. Formerly a dwelling-house could not be closed without an order being obtained from an outside authority (the Magistrates), who in the vast majority of cases had not seen the property, and sometimes were not interested in the question of bettering the conditions under which the people lived, but who were bound to hear evidence, often of a most contradictory character, and then come to a decision as to whether a particular house was fit for human habitation or not.

Under the new Act a real housing authority is set up who are responsible to the citizens for the condition of housing, and whose direct object is to get those houses that are really unfit to live in either made habitable or pulled down. Instead of the procedure which obtained under the old Act, the members of the Public Health and Housing Committee actually see the property themselves, and having seen it adjudicate upon it, and there is now little difficulty in pointing out to them its bad conditions. It may be said, indeed, that there is no longer a procedure hindering work at every step, but rather one which urges progress at an increasing rate.

In the City of Birmingham there are probably between 40,000 and 50,000 back-to-back houses, a large number of which are in courtyards or in short terraces shut in behind houses which face the street. Much of this class of property is becoming worn out, and as a result owners are to an ever-increasing extent lessening their expenditure on its upkeep.

In addition to small house property being allowed to get into a dilapidated condition for the above reason, occupiers themselves are demanding better and more decent accommodation than these houses give, with the result that for many years past a large number in the centre of the town have been void. Figures have been given in previous reports and in this report showing the remarkable migration of the people of Birmingham from the central areas to the suburbs, the result being that the small house property referred to above is rapidly lessening in amount, because when the owners find that it does not pay them to have it done up, they either pull it down altogether and erect other buildings, or leave the site as a vacant area.

In the report for 1911 (page 9) the number of houses in each of the wards of the old City is set out for 16 years, and it will be seen that in the case of St. Bartholomew's Ward there were in 1911 no less than 874 houses fewer than in 1896. Similarly, in St. Mary's, Market Hall, St. Paul's, St. Thomas', St. Martin's, St. Stephen's, and St. George's Wards great decreases are recorded.

In 11 wards in the old City the total number of occupied houses decreased by 5,192 during the 16 years in question. Nearly all this decrease represents houses which have been removed, because they were old and dilapidated and objectionable as dwelling houses. The tenants have been re-housed either directly or indirectly in better houses situated in the suburbs.

As one of the most important parts of the housing policy in Birmingham the City was extended in 1911, with a view to controlling the erection of dwellings in the suburban areas, and town planning has followed, perhaps not so quickly as many would have desired, but at such a rate that it can be claimed that no other city has done more in the way of town planning than Birmingham.

To complete the City's armamentarium against bad housing conditions, power is now required to enable town planning of the central areas with a view to enabling the owners of property in the centre to develop their land which has been cleared of bad houses in a way which will be permanent, and not liable to the risks which they are under at the present time, and which to a large extent prevent adequate housing accommodation being provided in the central areas.

Something very much better than the back-to-back courtyard house must form the minimal requirement for the meanest town dweller. Within recent years travelling facilities have been so improved that it is possible now to spread the population of Birmingham over a larger area than ever before, and in so doing to provide in all but the central business area and in manufacturing areas places where houses can be erected in pleasant surroundings. An essential feature, from which there appears to be no exception is that such houses shall be self-contained, with the necessary conveniences and water supply attached to each house.

During 1912 there were 926 houses represented as unfit for human habitation, mainly because they were damp and dilapidated, and had insanitary surroundings. Every house represented is visited by members of the Public Health and Housing Committee.

The number of houses in regard to which closing orders were made by the Public Health and Housing Committee during 1912 was 727. The owner or owners had been interviewed in every case. The amount of work entailed in doing this was very considerable, and required many special meetings. In addition the work thrown on the Town Clerk's Department in obtaining the ownership conditions of these houses was very heavy, because an endeavour was made to get all parties interested in the property to be represented before the Committee.

It will be noted from the tabular statement below that the work of 1912 exceeded considerably that of any previous year in the number of representations and number of demolition orders made:—

Year.	Represented.		Rendered Habitable.		Demolished.		Closing Orders.		Demolition Notices.	
	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.
1903... ...	304	85	155	32	34	19	65	19	51	15
1904... ...	1119	143	242	37	127	33	233	31	36	6
1905... ...	793	98	330	38	230	43	327	41	61	7
1906... ...	596	87	370	49	117	26	199	25	143	13
1907... ...	806	120	262	41	422	64	679	102	157	24
1908... ...	650	79	494	69	257	43	184	24	164	30
1909... ...	521	70	381	54	216	45	220	34	54	9
1910... ...	609	72	277	46	291	59	173	27	41	10
1911... ...	278	49	202	30	163	37	360	51	71	11
1912... ...	926	135	300	44	349	36	727	106	209	37
Total ...	6602	938	3013	440	2206	405	3167	460	987	162

The work commenced during 1912 could not, of course, be completely finished during that year, and it will, therefore, be found that the work as regards houses being rendered habitable and demolished during the following year will be considerably greater than in any previous year.

The following table gives the number and situation of the houses dealt with during 1912:—

REPRESENTED.

Situation of Property.	No. of Houses.
Alfred Street, Aston, 24, 26 and 1 and 2 at rear ...	4
Alfred Street, Aston, 4 and 5 "Sunnyside"	2
Ashted Row, 213, 214 and 215	3
Aston Road, 15 and 16	2
Bartholomew Row, 23	1
Bath Row, 6 houses in Bath Place	6
Bath Street, 1-7 in 2 Court	7
Bell Barn Road, 5 houses in 10 Court	5
Belmont Row, 1-4 rear 45	4
Bishopsgate Street, 5 and 6 and 10-16 and unnumbered house at rear	10
Bishopsgate Street, 8, 9 and 10 and 1, 2, 3 and 9 at rear	7
Bishopsgate Street, 4 and 5 in 14 Court	2
Bradford Street, 1-4 in 19 Court	4
Brearley Street, 133, 135, 137 and 1-4 in 39 Court ...	7
Brearley Street, 61, 63 and 1, 2 and 3 at rear	5
Centre Row, 1-12 and unnumbered house rear and 59 Inge Street	14
Cheapside, 5 and 6 in 15 Court	2
Clement Street, 1-5 rear 2 and 3	5
Clement Street, 5 and 6 rear 61	2
Darwin Street, 56 and 57 and 1-11 in 9 Court ...	13
Derby Street, 12-15 and 2-7 Lily Crescent, and six houses at rear of these	16

Situation of Property.	No. of Houses.
Don Street, 27, 29, 31, 33, 35 and 37 and 1-6 and one unnumbered house at rear	13
Don Street, 39, 41, 43, 45, 47 and 49 and 1-6 at rear	12
Fazeley Street, 127, 129, 131, 133, 135, 137 and 139	7
Grange Road, Small Heath, 124, 125, 125A, 126 and 127	5
Green Lane, Handsworth, 65, 67 and 69	3
Gt. Brook Street, 12 houses in "Ashted Place"	12
Gt. Hampton Row, 1-23 and 25, 26 and 27 rear 109	26
Gt. Hampton Street, house rear 64, 1, 2, 3, 7 and 8 Well Street, one unnumbered house adjoining No. 7, and 7 houses rear 1-8 Well Street	14
Gt. Lister Street, 1, 2, 3 and house adjoining No. 3	4
Gt. Lister Street, 10, 12, 13 and 14	4
Gt. Lister Street, 41-46 and 1-6 at rear	12
Gt. Lister Street, 27, 28, 29, 30 and 30A, and 246, 248 and 250 Windsor Street	8
Hatchett Street, 61, 62 and 1-5 at rear	7
Hatchett Street, 1, 2 and 3 rear 63 and 64	3
Hatchett Street, 1, 2 and 3 rear 65 and 66	3
Hatchett Street, 82 and 82½ and 1, 2, 3 and 3 unnumbered houses at rear	8
Hatchett Street, 83 and 83½ and 4, 5 and 6 at rear	5
High Park Street, Nechells, 42 and 1-6 at rear	7
Hockley Street, 121 and house at rear	2
Holborn Hill, 1-12 in "Prospect Place"	12
Holliday Street, 229 and house at rear	2
Holloway Head, 71 and 73 and 1-8 in 15 Court	10
Holloway Head, 1-7 in 13 Court	7
Holyhead Road, Handsworth, 377 and 2 unnumbered houses at rear	3
Holyhead Road, Handsworth, 1, 2 and 3 in 4 Court	3
Hospital Street, 157	1
Icknield Street, 278 and 1-4 at rear	5
Keeley Street, 5 and 7 and 1 and 2 at rear	4
Keeley Street, 6, 8, 10, 12, 14, 16, 18 and 20	8
Keeley Street, 9, 11, 13, 15 and 17 and 1-6 at rear	11
Kenyon Street, 1-8 rear 11 and 12	8
Key Hill 11, 15 and 16	3
Key Hill, 1-8 rear 17 and 18	8
Lawley Street, 4-13 in 4 Court	10
Lawley Street, 247, 249 and 2-5 rear 239-245	6
Lichfield Road, Aston, 7 and 12 rear 122	2
Lichfield Road, Aston, 8, 9, and 10 Sutton Terrace	3
Lichfield Road, Aston, 2 and 3 rear 465 and 467	2
Little Edward Street, 7-10 and 1-4 at rear	8
Lord Street, 1-8 in 2 Court	8
Lord Street, 112, 114, 116 and 118 and 44, 46, 48, 50, 52 and 1-4 in 1 Court, Proctor Street	13
Lower Tower Street, 4 houses rear coalyard adjoining No. 6	4
Lower Tower Street, 25, 26, 27 and 1-8 in 9 Court	11
Lower Tower Street, 4 houses rear 71	4
Lower Tower Street, 68, 69 and 10 houses in 26 Court	12
Lower Trinity Street, 17, 18, 19 and houses rear 19	4
Lower Trinity Street, 1-5 rear 29-30	5
Lower Trinity Street, 6 and 7 and 2 unnumbered houses rear 32	4
Lower Trinity Street, 53-56 and 1-4 at rear	8
Miles Street, Spring Vale, 1-8 in Ash Grove	8
Miles Street, Spring Vale, 9-16 in Lime Grove	8
Moorsom Street, 12, 14, 16, 18 and 8 houses in 2 Court	12
Moorsom Street, 20 and 22 and 1-5 in 4 Court	7
Morville Street, 1, 2 and 3 rear 10	3
Morville Street. 2 unnumbered houses rear 14 and 15	2
Nelson Street, 32, 34, 36, 38 and 2, 3 and 4 at rear	7

Situation of Property.	No. of Houses.
Newhall Street, 1, 10 and 9 void houses in 2 Court	11
New John Street West, 345, 346, 347, 1 rear 347 and 1-15 in 46 Court	19
New Summer Street, 78 and 80 and 1-8 in 16 Court	10
New Summer Street, 82 and 84 and 1-9 in 18 Court	11
Northumberland Street, 19	1
Northumberland Street, 43 and 9 at rear	2
Pool Street, Aston, 9 and 11	2
Pope Street, 9-15 and 7 houses at rear	14
Pope Street, 1-6 rear 31-40	6
Pritchett Street, 26 and 7 houses in 6 Court	8
Pritchett Street, 1 and 2 rear 107 and 108	2
Pritchett Street, No. 6 and 1 at rear	2
Proctor Street, 24, 26, 28, 30 and 32 and 1-5 in 3 Court	10
Proctor Street, 34, 36, 38, 40 and 42 and 1-5 in 2 Court	10
Railway Terrace, Nechells, 7 and 8 and house adjoining 11	3
Regent Place, Regent Row, 9 houses in Cherry Court	9
Regent Place, Regent Row, 14, 15 and 16	3
Regent Place, Regent Row, 25, 26, 27 and 28	4
Richard Street, 44-50 and 1-6 in 7 Court	13
Rowland Street, 6-14, house rear 12, and 4 and 5 in 1 Court, and 38, 40, 42 and 44 Windsor Street	16
Saltley Road, 31, 33, 35 and 37 and 1-9, 11 and 13-20 at rear	22
Sand Street, 7 and 8 and 1, 2 and 3 at rear	5
Sand Street, 2 and 3 rear 9 and 10	2
Sheepcote Lane, 3 and 4 rear 10 and 11	2
Sheepcote Lane, 12 and 13 and 1-5 at rear	7
Sheepcote Lane, 15, 16 and 17 and 1-7 at rear	10
Sheepcote Lane, 18 and 19 and 1, 2 and unnumbered house at rear	5
Sheepcote Lane, 1-4 rear 20-23	4
Sherborne Street, 1-8 rear 136-139	8
Summerhill Street, 1-10 in "Summerhill Place"	10
Summer Lane, 201-205 and 1-6 at rear	11
Summer Lane, 206-210 and 1-6 at rear	11
Swallow Street, 46, 47 and 48 and 5 and 6 at rear	5
St. George's Street, 48 and 49 and 2 unnumbered houses at rear	4
St. George's Street, 50 and 51 and 1 and 2 at rear	4
St. George's Street, 57 and 58 and 1, 2, 3, 5, 6, 8, 9 and 2 unnumbered houses at rear	11
St. George's Street, 55 and 56 and 9 houses at rear	11
St. Paul's Square, "Britannia Inn," and 10-16 at rear	8
St. James' Place, 24, 25 and 26	3
St. James' Place, 30-39	10
Tower Road, Aston, Nos. 1 and 2 rear 14 and 16	2
Union Road, Aston, 2 unnumbered houses rear 14	2
Upper Portland Street, Aston, 13, 15 and 17 and 1 and 2 at rear	5
Vauxhall Road, Nos. 79, 81 and 83	3
Vauxhall Road, Nos. 1-5 in 5 Court	5
Vauxhall Road, Nos. 85 and 87 and 5 houses in 6 Court	7
Vauxhall Road, 6 houses in 8 Court (Jones' Buildings)	6
Vauxhall Road, No. 7 rear 97	1
Watery Lane, Nos. 3-11 rear 174-177	9
Well Street, unnumbered house rear No. 8	1
Wharf Street, Aston, Nos. 16, 18, 20, 22 and 1-6 at rear	10
Whittall Street, Nos. 2-10 rear 17 and 18	9
William Henry Street, wooden house at blind end of street	1
Wilton Street, Lozells, Nos. 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 and 50 and 12 houses at rear	24
Windsor Street, Nos. 223, 225 and 1 and 2 at rear	4

Situation of Property.	No. of Houses.
Windsor Street, Nos. 227 and 229 and 1 and 2 in 17 Court	4
Windsor Street, Nos. 231 and 233 and 1 and 2 in 19 Court	4
Windsor Street, Nos. 240, 242 and 244 and 1-5 at rear	8
Total	926

RENDERED HABITABLE.

Situation of Property.	No. of Houses
Albion Street, 5-10	6
All Saints' Street, 1-4 rear 15	4
Anthony Road, 10-26	9
Ashley Street, 1, 2, 3 and 5 rear 85	4
Barford Street, 102-110	5
Barford Street, 111 and 113	2
Barford Street, 142 and 1-6 and 8-10 in 28 Court ...	10
Belmont Row, 1-3 in 4 Court	3
Bishopsgate Street, 2-6 rear 26	5
Bishopsgate Street, 1-6 rear 29	6
Bishopsgate Street, 1, 3, 4, 5, 6 and 7 in 10 Court ...	6
Bishopsgate Street, 1, 2, 3 and 5 rear 80 and 81 and 2-5 and 7 rear 82A and unnumbered house rear 81	10
Blucher Street, 2-5 and rear	7
Camden Street, 166-172 and house adjoining 172 ...	5
Cecil Street, 91, 93, 94 and 95 and 1-6 at rear ...	10
Cecil Street, 31, 32, 34 and 2-8 and 10 in 13 Court ...	11
Cecil Street, 45-54 and Hanley Street, 25-30	16
Charles Henry Street, 1-5 in 26 Court and 1-5 in 27 Court	10
Cheapside, 79, 81, 82 and 1-4 in 15 Court...	7
Cheapside, 71, 72 and 1-4 in 12 Court	6
Clement Street, 3, 4 and 5 rear 2 and 3	3
Coleman Street, rear 38	1
Frankfort Street, 55-67 and 1-4 in 11 Court	11
Gt. Lister Street, 2-7 and 9-14 Leicester Square... ...	12
Heath Street, 1-12 Prince of Wales Terrace	12
Highgate Street, 28-31 and 8 houses in 9 Court ...	12
Hospital Street, 2-5 in 29 Court	4
Hospital Street, 299 and 1 and 2 at rear	3
Inge Street, 37, 38 and 1-6 in 11 Court	8
Lancaster Street, 103 and 2-5 in 18 Court	5
Lower Essex Street, 65 and 1 at rear	2
Morville Street, 2 and 3 rear 10	2
Morville Street, 2 unnumbered houses rear 14 and 15	2
Norton Street, 41-46 and 1-3 at rear and unnumbered house in Wharf Street	11
Northumberland Street, 61, 62 and 1 and 2 at rear ...	4
Oxygen Street, 7-10	4
Pritchett Street, 12, 13, 15 and 2 and 4-8 in 3 Court ...	9
St. Martin's Street, 1, 2, 3 and 5 in 4 Court	4
Sand Pits, 126-129 and 2-6 and 8-12 and unnumbered house at rear	15
Skinner Lane, 50 and 1, 2, 4, 5 and 6 at rear	6
Stoke Street, 1 and 3 rear 11	2
Tower Street, 41 and 1-5 in 13 Court	6
Wharf Street, Aston, 16-22 and 1-6 at rear	10
William Henry Street, 20-29	10
Total	300

DEMOLISHED.

Situation of Property.	No. of Houses.
Albion Street, 1 rear 5-10	1
Ashley Street, 4 rear 85	1
Barford Street, 53-105 and rear	34
Barford Street, 7 in 28 Court	1
Barford Street, 139 and 141	2
Belmont Row, 4 in 4 Court	1
Bell Barn Road, 3, 4 and 5 rear 200	3
Bishopsgate Street, 1-6 in 5 Court	6
Bishopsgate Street, unnumbered house rear 26	1
Bishopsgate Street, 2 rear 31	1
Bishopsgate Street, 4 rear 80 and 1 and 6 and unnumbered house rear 82A	4
Bloomsbury Street, house rear 303	1
Bradford Street, 5 unnumbered houses rear 331	5
Bradford Street, 1-4 rear 236 (19 Court)	4
Brearley Street, 71 and 73	2
Brearley Street, 5 houses in 11 Court	5
Brearley Street, 41, 43 and 1-6 in 17 Court	8
Brearley Street, 3 in 19 Court	1
Brearley Street, 1-4 in 27 Court	4
Cecil Street, 92	1
Cecil Street, 1-6 in 2 Court	6
Cecil Street, 33 and 1 and 9 in 13 Court	3
Cheapside, 67-70	4
Cheapside, 80 and 3 in 16 Court	2
Coleman Street, 1, 2 and 3 rear 38	3
Coleman Street, one house in 13 Court	1
Clement Street, 1 and 2 rear 2 and 3	2
Coventry Road, 1, 2 and 3 rear 288	3
Factory Road, 13-23 and house rear 23	8
Gosta Green, 7 houses in 2 Court	7
Gt. Hampton Street, 14 and 15 Courts	26
Gt. Lister Street, 8 Leicester Square	1
Hanley Street, 23 and 24	2
Holloway Head, 1-7 in 13 Court	7
Holloway Head, 71 and 73 and 1-8 in 15 Court	10
Hospital Street, 147-153 and 1 at rear	5
Hospital Street, 221	1
Hospital Street, 247-249 and 2 unnumbered houses at rear	4
Hospital Street, 297	1
Inge Street, 39 and 7 and 10 in 11 Court	3
Lancaster Street, 1 in 18 Court	1
Lancaster Street, 2-7 in 28 Court	6
Lombard Street, 26 and 28 and 1 and 2 in 14 Court	4
Lower Essex Street, 2 rear 65	1
Lower Trinity Street, 1-5 rear 29-30	5
Lower Trinity Street, 6 and 7, and two unnumbered houses in 7 Court	4
Morville Street, 1 rear 10	1
Northwood Street, 1-13 and unnumbered house in 18 Court	14
Northwood Street, 1-4 rear 57	4
Park Road, Hockley, 2 unnumbered houses rear 509	2
Pritchett Street, 14 and 1 and 3 in 3 Court	3
Pritchett Street, 3 and 4 in 27 Court	2
Sand Pits, 7 rear 127	1
Sandy Lane, unnumbered house rear 8	1
Sheepcote Street, 2-13 rear 3 and 4	12
Skinner Lane, 51 and 3 at rear	2
Sloane Street, 22, 23 and 24	3
Stoke Street, 2 rear 11	1
St. Paul's Square, "Britannia Inn," and 10-16 at rear	8

Situation of Property.	No. of Houses.
St. Martin's Street, 4 in 4 Court	1
St. James' Place, 4 and 5	2
St. James' Place, 6-11 and 1-6 at rear	12
St. James' Place, 47	1
Talfourd Street, 59-67 and rear	27
Tower Street, 6 in 13 Court	1
Vauxhall Road, 61-77	9
Vauxhall Road, 3-16A Union Terrace	16
Vauxhall Road, 79-97 and 5 and 6 Courts	20
Total	349

Closing Orders.

Situation of Property.	No. of Houses.
Alfred Street, Aston, 24 and 26 and 1 and 2 at rear	4
Alfred Street, Aston, 4 and 5 Sunnyside	2
Bacchus Road, 7 and 8 and 1 and 2 at rear	4
Bacchus Road, 113 and 114	2
Barford Street, 53-113 and 7, 9 and 15 Courts	37
Bartholomew Row, No. 23	1
Bath Row, 6 houses in Bath Place	6
Bath Street, 1-7 in 2 Court	7
Bell Barn Road, 3, 4 and 5 rear 200	3
Bell Barn Road, 5 unnumbered houses in 10 Court	5
Belmont Row, 1-4 in 4 Court	4
Blucher Street, 2-5 and rear	7
Blucher Street, 1 and 2 in 6 Court	2
Blucher Street, 64	1
Bradford Street, 1-4 in 19 Court	4
Brearley Street, 133-137 and 39 Court	7
Buck Street, Nos. 1, 2 and 3	3
Cecil Street, 7-10 in 13 Court	4
Cheapside, 5 and 6 in 15 Court	2
Cheapside, 89 and 90 and 1-9 in 20 Court	11
Clement Street, 1-5 rear 2 and 3	5
Clement Street, 5 and 6 rear 61	2
Coleman Street, 44 and rear	5
Coleman Street, unnumbered house in 13 Court	1
Derby Street, 12-15 and 2-7 and rear Lily Crescent	16
Factory Road, 13-23 and house rear 23	8
Fazeley Street, 127-139	7
Fox Street, 27	1
Grange Road, Small Heath, 124-127	5
Green Lanes, Handsworth, 65, 67 and 69	3
Grosvenor Street West, 70 and 72 and 1 and 2 at rear	4
Gt. Brook Street, "Ashted Place"	12
Gt. Lister Street, 10 and 3 Court	5
Gt. Lister Street, 41-46 and 1-6 at rear	12
Gt. Hampton Row, 1-23 and 25-27 rear 109	26
Hatchett Street, 82, 82½ and rear	8
Hatchett Street, 83, 83½ and rear	5
High Park Street, Nechells, 42 and 1-6 at rear	7
Hockley Street, 121 and house at rear	2
Holborn Hill, 1-12 "Prospect Place"	12
Holliday Street, 229 and house at rear	2
Holloway Head, 1-7 in 9 Court	7
Holloway Head, 1-7 in 13 Court	7
Holloway Head, 71 and 73 and 1-8 in 15 Court	10
Holyhead Road, Handsworth, 377 and 2 houses at rear	3
Holyhead Road, Handsworth, 1, 2 and 3 in 4 Court	3
Hospital Street and Frankfort Street Corner	15
Hospital Street, 157	1
Icknield Street, 278 and 1-4 at rear	5

Situation of Property.	No. of Houses.
Keeley Street, 6-20	8
Kenyon Street, rear 11 and 12	8
Key Hill, 11	1
Key Hill, 16 and 1-8 at rear of 17 and 18	9
Lawley Street, 4-13 in 4 Court	10
Lichfield Road, Aston, 2 and 3 rear 465 and 467	2
Lichfield Road, Aston, 8, 9 and 10 Sutton Terrace	3
Lichfield Road, Aston, 7 and 12 rear 122	2
Little Edward Street, 7-10 and 1-4 at rear	8
Lord Street, 1-8 in 2 Court	8
Lower Trinity Street, 1-5 in 6 Court	5
Lower Trinity Street, 6 and 7 and two unnumbered houses in 7 Court	4
Lower Trinity Street, 53-56 and rear	8
Lower Trinity Street, 17-19 and house rear 19	4
Meriden Street, 31, 32 and rear	5
Miles Street, 1-8 Ash Grove and 9-16 Lime Grove	16
Milk Street, 1-5 in 2 Court	5
Moorsom Street, 12-22 and 2 and 4 Courts	19
Morville Street, 1, 2 and 3 rear 10	3
Morville Street, two unnumbered houses rear 14 and 15	2
Nelson Street, 32-38 and rear	7
New John Street, 137, 138 and 1-9 at rear	11
New John Street West, 345-347 and 46 Court	19
New Summer Street, 78, 80 and 1-8 in 16 Court	10
New Summer Street, 82, 84 and 1-9 in 18 Court	11
Northumberland Street, No. 19	1
Northumberland Street, 43 and 9 at rear	2
Northwood Street, 1-13 in 13 Court	13
Pool Street, Aston, 9 and 11	2
Pope Street, 9-15 and 7 houses at rear	14
Pope Street, 1-6 rear 31-40	6
Railway Terrace, Nechells, 7, 8 and house adjoining No. 11	3
Sand Street, 7 and 8 and 1, 2 and 3 at rear	5
Sand Street, 2 houses rear 9 and 10	2
Sheep Street, 21-23 and house rear 23	4
Sheepcote Lane, 3 and 4 rear 10 and 11	2
Sheepcote Lane, 12, 13 and 1-5 at rear	7
Sherborne Street, 1-8 rear 136-139	8
Summerhill Street, 6-9 in Summerhill Place	4
Summer Lane, 201-210 and rear	22
Swallow Street, 46-48 and 5 and 6 at rear	5
St. George's Street, 48, 49 and 2 houses at rear	4
St. George's Street, 50, 51 and 2 houses at rear	4
St. Paul's Square, "Britannia Inn," and 10-16 at rear	8
Tower Road, 1 and 2 rear 14	2
Union Road, Aston, 2 unnumbered houses rear 14	2
Upper Portland Street, 13-17 and 1 and 2 at rear	5
Vauxhall Road, 3-8 in Union Terrace	6
Vauxhall Road, 15-16A in Union Terrace	3
Vauxhall Road, 79-97 and 5 and 6 Courts	20
Watery Lane, 3-11 rear 174-177	9
Well Street and Gt. Hampton Street corner	15
Whittall Street, 2-10 rear 17 and 18	9
William Henry Street, wooden house at end of street	1
Wilton Street, Lozells, 28-50 and rear	24
Windsor Street, 223 and 225 and 1 and 2 at rear	4
Windsor Street, 227-233 and 17 and 19 Courts	8
Total	727

DEMOLITION ORDERS MADE.

Situation of Property.	No. of Houses.
Bacchus Road, 7 and 8 and 1 and 2 at rear ...	4
Bacchus Road, 113 and 114	2
Blucher Street, 64	1
Blucher Street, 1 and 2 in 6 Court	2
Bordesley Street, 3-9 in 8 Court	7
Brearley Street, 27 and 29	2
Brearley Street, 71 and 73 and 1-4 in 27 Court ...	6
Bridge Road, Saltley, 92, 94 and 96	3
Cecil Street, 84, 85 and 86 and 2 Court	10
Cheapside, 67-70	4
Coventry Road, 1-3 rear 288	3
Frankfort Street and Hospital Street corner	15
Holloway Head, 2-7 in 9 court	6
Humpage Road, 11 and 12	2
Inge Street 1 and 2 rear 18 and 19	2
Keeley Street, 6-20...	8
Lower Tower Street, 28 and 10 Court	14
Meriden Street, 31 and 32 and rear	5
Moorsom Street, 40-46 and 10 Court	7
Nelson Street, 3-10 rear 85 and 87	8
Newtown Row, 1-6 in 34 Court...	6
Northwood Street, 1-13 in 13 Court	13
Northwood Street, 4-9 in 14 Court	6
Northwood Street, 1-14 in 18 Court	14
Park Road, Hockley, 2 unnumbered houses rear 509	2
Pritchett Street, 3 and 4 in 27 Court	2
Sandy Lane, house rear No. 8	1
Sheepcote Street, 3 and 4 and 1-13 at rear	15
Skinner Lane, 50 and 51 and 1-6 at rear	8
Sloane Street, 22, 23 and 24	3
St. James' Place, 4 and 5	2
St. James' Place, 6-11 and 1-6 at rear...	12
St. James' Place, 47	1
Vauxhall Road, 73-77	3
Vauxhall Road, 89-97	5
Vauxhall Road, 9 Union Terrace	1
Vauxhall Road, 15, 16 and 16A, Union Terrace ...	3
Total	209

The cost of repairing the 300 houses rendered habitable amounted to approximately £2,298 for the demolition of obstructive buildings, which amount was paid by the Corporation, and for owners' repairs the amount was approximately £13,182.

COMMON LODGING HOUSES.

Owing to the serious and prolonged illness of the Inspector of common lodging houses the number of day and night visits was not so large as in preceding years. The Inspector has now recovered, and is on full duty again, and the number of visits will be very much the same as formerly.

At the beginning of 1912 there were 42 registered common lodging houses in the City, and at the end of the year there were 41, one house having been closed. These houses had beds for 2,528 lodgers. Three lodging houses which are set aside for the use of women exclusively, and having 93 beds, are included in the above number.

The following table shows the work done by the Inspector during the year, and also details of the work ordered as the result of the inspections :—

Visits paid by day	1,624
Visits paid by night	99
Windows not thrown open	6
Floors requiring cleansing	26
Bedding to be provided	45
Ventilation to be improved	8
Repairs to walls, floors, roofs, windows	21
Wash basins to be provided	2
Sinks to be repaired	10
Water-closets to be provided	3
Water-closets to be repaired	21
Ash-tubs to be provided	5
Drains to be repaired	6

HOUSES SUB-LET IN LODGINGS.

There were 650 houses on the register at the end of the year, having accommodation for 3,584 adults. Eighty-three of these houses were registered during 1912, having accommodation for 517 persons. There were 3,534 visits paid to these houses by the Inspector during the year, as compared with 3,147 in the previous year. The following conditions were found requiring amendment :—

Overcrowding	25
Improperly mixing the sexes	17
Houses requiring repair	157
Rubbish to be removed	42
Rooms not swept daily	411
Passages not swept	120
Stairs not swept	248
Filthy bedding to be cleansed	24
Houses to be cleansed	169
Drains, etc., obstructed	40
Water-closets to be repaired	34
Ash-tubs to be provided	18
Windows not opened	363
Houses reported to Medical Officer of Health as needing to be dealt with under Housing of Working Classes Act	87

There is an increasing tendency on the part of owners of slum property to allow them to get into the hands of sub-let lodging-house keepers. During the year under review an attempt was made to improve the bye-laws by throwing certain responsibility on the actual owner of the property to keep it in a satisfactory condition, but the bye-laws were not approved by the City Council. It is hoped, however, that certain additional local powers will be obtained in Parliament to require a very much higher standard for this class of house. The work of supervising this group of houses is amongst the most difficult of any undertaken by the Public Health and Housing Department.

CANAL BOATS.

The following report was made to the Local Government Board in January last on the work done under the Canal Boats Acts :—

Public Health and Housing Department,
The Council House,
January 3rd, 1913.

Gentlemen,—In compliance with Section 3 of the Canal Boats Act, 1884, I present to you the annual report of the work accomplished under the Canal Boats Acts, 1877 and 1884, and the Regulations of the Local Government Board made thereunder for the year ending 31st December, 1912.

Inspector William G. E. Childs has continued as inspector under the above Acts. He combines in his work certain duties connected with the attendance at school of canal boat children; and in addition to the work under the above Acts he also acts as Inspector of Houses let in lodgings in Birmingham. He has been paid at the rate of £110 10s. 0d. per annum, with uniform and cycle allowance, and his office is at the Council House.

1,120 boats, registered to carry 3,529 adults, were inspected during the year. The distribution of these inspections among the four quarters of the year is shown as follows:—

1st quarter ...	... 297 inspections.	3rd quarter ...	... 247 inspections.
2nd ,, ...	... 320 ,,	4th ,, ...	... 256 ,,

The following table gives the corresponding figures since 1906:—

Year.	Number of Boats inspected.	Number of Adults Boats are registered to carry.	Year.	Number of Boats inspected.	Number of Adults Boats are registered to carry.
1906 ...	... 1059	... 3507½	1910 ...	... 1044	... 3399½
1907 ...	... 1047	... 3348	1911 ...	... 1062	... 3511½
1908 ...	... 1080	... 3554½	1912 ...	... 1120	... 3529
1909 ...	... 738	... 2416			

The actual numbers carried on the boats inspected during 1912 were 1,538 men, 728 women, and 799 children, making a total of 3,065 persons, equivalent to 2,665½ adults.

Of the 1,120 boats inspected 1,019, or 90·9%, were found to be in compliance with the Acts and Regulations, but in regard to 101 boats contraventions existed, and notices were served on the owners. On 44 of these boats one contravention existed in each, on 19 boats two contraventions in each, on 31 boats three contraventions in each, and on 7 boats four contraventions in each. The total number of infringements found was, therefore, 203, and these are classified in the following table, which indicates and classifies also the complaints remedied:—

CONTRAVENTION.	Brought forward from 1911 to be dealt with.	Number found during 1912.	Notices complied with during 1912.	Carried forward to be dealt with in 1913.
Registration	1	12	11	2
Notification of change of master ...	—	—	—	—
Certificates	1	17	16	2
Marking	1	30	21	10
Overcrowding	1	6	7	—
Separation of the sexes	—	6	5	1
Cleanliness	—	—	—	—
Ventilation	—	—	—	—
Painting of cabins	3	47	37	13
Cabins repaired	9	76	74	11
Provision of water cask	—	9	6	3
Removal of bilge water	—	—	—	—
Notification of infectious disease ...	—	—	—	—
Admittance of inspector	—	—	—	—
	16	203	177	42

In no case during the year was recourse had to legal proceedings.

The custom of sending letters to owners, drawing attention to the requirements of the notices unfulfilled, has been continued with satisfactory results. As in previous years, compliance was readily made in most cases.

On the 17th December, 1912, a case of scarlet fever was reported from the canal boat No. 498, registered at Chester, berthed in the City. The patient was removed to hospital and the boat disinfected. Next day I examined the rest of the family, and found another child on board in the desquamating stage of the disease. The latter child was also removed to hospital and the boat again disinfected, and then allowed to proceed without further delay. The owner of the boat and the registration authority were informed, as was also the Medical Officer of Health of the district to which the boat was proceeding after leaving Birmingham.

The number of boats on the register on December 31st, 1912, was 433, as compared with 419 at the end of 1911. The figures for the past five years are:—

End of 1912 ...	433	End of 1909	397
,, 1911 ...	419	,, 1908	396
,, 1910 ...	402		

On the basis of the figures arrived at in 1909, in the manner explained in the report of that year, the number of boats registered in Birmingham which are now in use or available is about 300. This figure must be taken as only approximate.

There have been 27 boats registered in Birmingham during 1912, and 13 registrations cancelled, making a net increase of 14 boats. Of the 27 boats registered, 23 were new boats, and 4 were old boats re-registered, of which 2 had previously been registered in Birmingham, and are included in the 13 registrations cancelled.

Amongst the boats registered during the year were three motor canal boats (Nos. 1256, 1275 and 1276) belonging to one firm. These are all propelled by crude oil internal combustion engines, and are fitted with a cabin immediately astern of the engine room.

There are now five of such motor canal boats registered with this authority, there having been two, viz.:—Numbers 1242 and 1249, registered during 1911, the latter two boats belonging to another firm.

Your obedient servant,

T. Shadick Higgins, M.D., B.Sc.,

Assistant Medical Officer of Health.

MILKSHOPS.

Two Inspectors devote the whole of their time to the inspection of dairies, milkshops, and purveyors' premises in the City, the object being to see that the milk is stored under proper conditions, and that the utensils used in the storage, distribution, and sale of milk are kept properly clean. The work of these Inspectors is indicated in the table below:—

	1912
Dairies on the register	10
Milkshops on the register	4,070
Purveyors on the register	539
Dairies registered during the year	0
Milkshops registered	1,825
Purveyors registered	99
Dairy certificates cancelled	0
Milkshops ,, ,, ...	739
Purveyors ,, ,, ...	69
Visits to dairies	41
Visits to milk shops and milk stores...	10,693
Dirty vessels found at milk shops and milk stores	20
Shops, cellars, and pantries whitewashed	253
Dirty churns found at railway stations	0
Cases of infectious disease reported at milkshops ...	78

INSPECTION OF MEAT, FISH, FRUIT, ETC.

At the commencement of 1912 there were in addition to the public abattoir 193 private slaughterhouses in the City. At the end of the year there were 185. For the inspection of these slaughterhouses and the meat, fish, and other food premises there is a staff of eight experienced and well-qualified inspectors.

During 1912 these inspectors made 13,152 visits to slaughterhouses, nine seizures of unsound meat, fish, or fruit were made, and in eight instances proceedings followed.

The following tabular statement gives an approximate idea of the work done:—

Bad Meat.		
Voluntarily surrendered	4,727	lots.
Seized by inspectors	4	,,
Weight destroyed	356	tons.
Persons prosecuted	7	
Penalties inflicted	£44	
Bad Fish, Poultry, etc.		
Voluntarily surrendered	1,318	lots.
Seized	2	,,
Weight destroyed	114	tons.
Bad Fruit, etc.		
Weight destroyed	31	tons.

SHOPS ACT, 1912.

This Act came into force on May 1st, 1912, and the following report contains a short statement of the work which has been done under it, and some recommendations which are considered advisable as a result of the experience gained.

The new provisions which the Act brought into existence were as follows:—

(*a*) The granting of a weekly half-holiday to all shop assistants from 1-30 p.m.

(*b*) The granting of time for meals to shop assistants.

(*c*) The closure of every shop on one day in each week from 1 p.m.

These are the main provisions of the Act, but unfortunately they have been qualified by conditions and exceptions to such an extent that the Act is one of considerable complexity in its interpretation, of real difficulty in administration, and of some hardship to the shopkeepers, especially in a shopping centre, such as Birmingham, in causing loss of trade.

The first procedure undertaken by the Public Health Department was to make known to each shopkeeper the requirements of the Act so far as his shop was concerned. The Factory and Workshop Inspectors and a number of assistant sanitary inspectors were employed to visit the shops and explain the requirements of the Act. In order that the fullest information should be given, the leaflet issued by the Home Office explanatory of the Act was handed to each shopkeeper.

The time occupied in this work was very much longer than was anticipated. Few visits occupied less than ten minutes, while in many cases half to one hour was occupied in going into the requirements of the large establishments. In addition, the attention of shopkeepers was drawn to the Act by means of advertisements in the Press.

The cost to the ratepayers of giving this information was approximately £314, no part of which was provided in the estimates for the year. A good deal of irritation was expressed by some shopkeepers when their attention was drawn to the requirements of the Act, and in several instances the Inspector was regarded as a very unwelcome visitor.

Each Inspector obtained at the time of his visit certain information to enable an estimate to be formed as to the amount of work to be undertaken each year, and as to where the shops were situated which needed most attention. The total number of occupied shops visited was 22,304, and 1,260 shops were found to be void.

Section I. (1) requires that on at least one week-day in every week a shop assistant shall not be employed about a shop after 1-30 p.m. There were 5,645 shops in which assistants were employed, who were not members of the shopkeeper's family. In each of these shops the Act requires a notice to be fixed in the shop stating the day on which each assistant is to have his half-holiday.

The administration of this part of Section 1 is practically impossible without the willing help of the shopkeepers or assistants in the case of the larger establishments, where it is impossible for an Inspector to attempt to find and identify the assistant who is being improperly employed. The total number of assistants employed in the 5,645 shops was 14,282. In approximately half of these shops (2,709) female assistants were employed to the number of 5,969.

To each of 5,645 shops employing assistants an average of two visits per annum will be required, making a total of 11,290 visits. The object of these visits is to ascertain that the prescribed notice specifying the day of the assistants' half-holiday is exhibited, and that the proper half-holidays and meal times are granted to the assistants.

Section II. (1) re-enacts the barbarous provision of the previous Act that a young person (under 18 years) shall not be employed about a shop for a longer period than 74 hours in one week. This means that it is legally possible to employ a person under 18 years of age for the following hours:—

Monday ...	8 a.m. to 9 p.m.	=	13 hours.	
Tuesday ...	8 a.m. to 9 p.m.	=	13 ,,	
Wednesday	8 a.m. to 1.30 p.m.	=	5½ ,,	(half-holiday.)
Thursday ...	8 a.m. to 10 p.m.	=	14 ,,	
Friday ...	8 a.m. to 10 p.m.	=	14 ,,	
Saturday ...	8 a.m. to 10-30 p.m.	=	14½ ,,	
			74 hours.	

There were 1,087 shops found where the young persons were entirely employed in or about the shop. Within this category come 1,308 persons. In addition, however, there were 2,657 other young persons who were employed as errand boys or otherwise, and, therefore, did not come within the meaning of the Section. The Act requires that in each of these shops a notice shall be exhibited setting out the conditions of Section 2.

Practically in no case will it be possible to find any shopkeeper in Birmingham who will keep his young assistants for 74 hours per week. Detection of cases of infringement of the hours depend on information being given to the Inspector by some person interested in the employed person. The only part of this Section necessitating regular inspection is that relating to the posting of the notices. Probably 10,000 visits will be required annually, in addition to those indicated under Section 1, to ascertain whether young persons are employed, and, if so, whether the notice is posted.

Section III. This re-enacts the provision of the Seats for Shop Assistants Act, requiring the occupier to provide seats in the proportion of one for each three assistants. As already pointed out, it was found that 5,969 female assistants were employed in 2,709 shops. As all these shops will have to be visited for other purposes the supervision of the working of this Section will not entail much extra work.

Section IV. This Section requires that all shops with certain exceptions shall close at 1 p.m. on one day in each week. Of the 22,304 shops in Birmingham no less than 10,559 are exempted form this provision by Schedule II. of the Act, and by exemption orders that the City Council have had to make under Section IV. There are also a considerable number of shops which combine exempted and unexempted trades, and may, therefore, remain open on the early closing day, provided that they pursue the exempted trade only and exhibit the prescribed notice.

Many trades have recently expressed their intention of applying for exemption orders on account of the loss occasioned during the specially busy season just before Christmas, notwithstanding the fact that at other times of the year they close regularly on one day in each week.

The administration of this Section is greatly complicated by the fact that, as mentioned above, a very large number of shops require to cease selling non-exempted articles while they may sell exempted ones on the closing day. For instance, a tobacconist may sell tobacco and cigars, but he may not sell walking sticks on his early closing day.

At each shop visited a record was made of the closing day selected, and these were as follows :—

Monday	3,040	Friday	50
Tuesday	616	Saturday	1,178
Wednesday	10,834	No day selected	5,201
Thursday	1,385		

The police have received instructions to assist this Department by reporting any shop which is open on the weekly closing day. The instructions which have been sent to the police are as follows :—

The Shops Act, 1912.

Instructions to Police Officers.

This Act provides for the compulsory closing at 1 p.m. on one day in each week of all retail shops, except in the case of certain exempted trades, of which there are many.

Each shopkeeper may select his own day for early closing, and must then close on the afternoon of that day every week.

The majority of shopkeepers have selected Wednesday for closing, and a considerable number, especially in the centre of the City, have chosen Saturday. Relatively few have selected other days.

The trades which are exempted in Birmingham include the following :—

The sale of intoxicating liquors.

The sale of refreshments.

The sale of motor, cycle, and air-craft supplies and accessories *to travellers only.*

The sale of newspapers and periodicals.

The sale of meat, fish, milk, cream, bread, confectionery, fruit, vegetables, flowers, and other articles of a perishable nature.

The sale of tobacco and smokers' requisites.

The sale of medicine and surgical appliances.

The sale of groceries.

Photographers' shops.

Shops in which one or more of the above exempted trades are practised need not close. If, however, a shop is used for one of these trades in addition to the sale of non-exempted articles, the shopkeeper must on his early closing day expose in a conspicuous place on the *outside* of his shop a notice in the following form :—" This shop is closed for to-day except for the trade or business of ( )."

Police officers should make themselves familiar with the early closing days of shops on their beat, and if any shop is found to be open on a day when it should be closed, the officer is to report it, stating the name of the shopkeeper and the number in the street, but without making any enquiry at the premises.

Officers are also to report " mixed " shops which are being kept open in cases where there is not exposed on the outside of the shop a notice similar to the above.

Officers will be exceeding their duty if they enter any shop or interrogate any shopkeeper or assistant in regard to the Shops Act.

During 1912 summonses were issued for 79 contraventions of the Act in 67 shops. The actual contraventions were as follows :—

Section I.	Not affixing assistants' half-holiday form	12
,, II.	Not affixing young persons' notice	2
,, IV. (3)	Not affixing notice specifying early closing day	24
,, IV. (1)	Not closing shop during early closing hours	41
		79

Fines were inflicted in every case except one which was dismissed, and one which was withdrawn. The total fines amounted to £14 6s. 0d., and costs paid by defendants to £27 0s. 0d.

The work of ascertaining whether half the shops in Birmingham close on the proper day is not difficult, because failure is quite obvious to the Inspector. The working of this part of the Act would, however, be facilitated if each shopkeeper were compelled to post up his day of closing on the outside of his shop.

Much more difficult will it be to ascertain that shops selling exempted articles only sell these. It is estimated that in addition to the visits already suggested at least 5,000 special visits should be made for the purposes of this Section alone.

From this it will be seen that for the reasonably efficient working of the Act over 26,000 visits should be made per annum. This will mean that four or five inspectors should devote their whole time to the work. Last year the Shops Act was worked by the Factory and Workshop Inspectors, the number having been increased from three to six to enable this to be done. Since the end of the year two additional Inspectors have been appointed and arrangements have been made for four Inspectors to devote their whole time to Factories and Workshops, and four to the work under the Shops Act.

FACTORIES AND WORKSHOPS.

The Home Office has asked that the work done by the Inspectors of the Local Authority under the Factory and Workshop Act should be tabulated on the lines set out in Table I.

The great and outstanding feature in our factories and workshops is the low standard of cleanliness and ventilation, which is thought by men and masters to be sufficient. One ought, however, to carefully guard such a statement, because there are a good many exceptions where works are models of cleanliness and good ventilation, and where there can be not the slightest doubt as to better work being done. Any set of conditions is felt by many of the workshop owners in Birmingham to be good enough for their own accommodation at the works, and an even lower type of conditions is thought to be fit for the workers.

Since the extension of the City the work of inspecting workshops has been interrupted on several occasions. During 1912 the introduction of the Shops Act threw on the Workshops Inspectors a considerable amount of work. This has now been entirely removed from them, so that in future the four inspectors will be free to devote the whole of their time to systematic inspection of workshops.

The following tables show the work done during the year under the Factory and Workshop Act :—

I.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of Inspections. (2)	Number of Written Notices. (3)	Number of Prosecutions. (4)
Factories (including Factory Laundries)	934	67	—
Workshops (including Workshop Laundries)	4545	126	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	309	10	—
Total	5788	203	—
Revisits paid	2133	—	—

In addition to the general questions of cleanliness and ventilation the inspectors found a considerable number of workshops where there were definite conditions requiring remedy at once, such as insufficient closet accommodation, or the want of separate closet accommodation for persons of each sex, overcrowding, defective drainage, and other similar matters. The work done in these respects is shown in Table II.

II.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS. (1)	Number of Defects. Found. (2)	Remedied. (3)	Referred to H. M. Inspector. (4)	Number of Prosecutions. (5)
Nuisances under the Public Health Acts :—				
Want of cleanliness	810	807	—	—
Want of ventilation	52	52	—	—
Overcrowding	7	7	—	—
Want of Drainage of floors	9	9	—	—
Other Nuisances	477	476	—	—
Sanitary accommodation—				
Insufficient	129	126	—	—
Unsuitable or defective	888	878	—	—
Not separate for sexes	69	68	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ...	—	—	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report) ...	1	—	—	—
Total	2442	2423	—	—

In Table III. (p. 90) is set out in accordance with the Home Office requirements the number of firms engaged in trades employing home workers. The whole of the outworkers' premises were visited during the year. Thirty-five cases of infectious disease were dealt with on these premises, and in six cases out-work was found to be done in unwholesome premises.

IV.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year	8,235

V.—OTHER MATTERS.

		Number.
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ...		7
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector ...	355
	Reports (of action taken) sent to H.M. Inspector ...	245
Other		1
Underground bakehouses (s. 101) :—		
Certificates granted during the year		—
In use at the end of the year		13

III.—HOME WORK.

NATURE OF WORK.	Outworkers' Lists, Section 107.									Outwork in Unwholesome Premises, Section 108.			Outwork in Infected Premises, Sections 109, 110		
	Lists received from Employers						Notices served on Occupiers as to keeping or sending Lists.	Prosecutions.							
	Sending twice in the year.			Sending once in the year.											
	Lists.	Outworkers.		Lists.	Outworkers.			Failing to keep or permit inspection of Lists.	Failing to send Lists.	Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110)
		Contractors	Workmen.		Contractors.	Workmen.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Wearing apparel—(1) making, etc.	402	1031	1995	29	66	42	—	—	—	—	—	—	—	21	
(2) cleaning and washing ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Household linen	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lace, lace curtains and nets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Curtains and furniture hangings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and upholstery	4	56	2	—	—	—	—	—	—	—	—	—	—	—	—
Electro-plate	48	240	111	2	—	13	—	—	—	—	—	—	—	—	—
File making	—	—	—	2	3	7	—	—	—	—	—	—	—	—	—
Brass and brass articles	24	60	130	—	—	—	—	—	—	—	—	—	—	—	—
Fur pulling	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cables and chains	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anchors and grapnels	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cart gear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locks, latches and keys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Artificial flowers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nets, other than wire nets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tents	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sacks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Racquet and tennis balls	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paper bags and boxes	56	—	340	5	—	19	—	—	—	—	—	—	—	3	—
Brush making	16	—	220	2	—	8	—	—	—	—	—	—	—	1	—
Pea picking	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feather sorting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carding, etc., of buttons, etc.	54	34	1960	7	1	89	—	—	—	6	6	—	—	10	—
Stuffed toys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Basket making	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chocolates and sweetmeats	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	604	1421	4758	47	70	178	663	—	—	6	6	—	—	35	—

BLACK SMOKE NUISANCES.

In the following tabular statement will be found an approximately accurate list of the chimneys in the City emitting black smoke or other noxious fumes.

Description of Trade.	No. of Chimneys emitting Black Smoke.					No. of Chimneys emitting other Noxious Fumes.				Totals.
	Boilers only, all types	Furnaces, all types.	Combined Boilers and Furnaces.	Baking Ovens.	Not Known.	Strip Casting.	Brass Casting	Refiners' Solder and Spelter Manufacturers.	Various.	
Tube and Metal Rolling Mills	36	122	45	—	22	106	1	—	28	360
Brassfounders, etc.	12	6	4	—	20	1	209	—	—	252
Nail, Nut and Bolt, etc., Manufacturers	15	9	2	—	11	—	17	—	—	54
Silversmiths, Electroplaters	18	2	2	—	10	—	—	—	—	32
Bedstead Manufacturers ...	4	17	1	—	12	—	—	—	—	34
Mineral Water ,, ...	3	—	—	—	3	—	—	—	—	6
Engineers	25	20	2	—	9	—	—	—	2	58
Brewers	27	10	3	—	2	—	—	—	—	42
Bakers	—	—	—	372	—	—	—	—	—	372
Butchers (Pork)	31	—	—	—	—	—	—	—	—	31
Laundries	21	—	—	—	1	—	—	—	—	22
Refiners, Metal Brokers, etc.	2	9	—	—	5	—	—	44	—	60
Pen Manufacturers ...	1	2	5	—	4	—	—	—	—	12
Paint, Varnish, etc., Manu- Manufacturers	5	—	1	—	3	—	—	—	7	16
Chemical Works	14	7	1	—	5	—	—	—	9	36
Glass Works	6	15	1	—	2	—	—	—	—	24
Saw Mills and Timber Works	18	—	—	—	—	—	—	—	—	18
Iron Founders	3	21	—	—	6	—	—	—	—	30
Gun, Cycle Fittings, etc. ...	18	10	—	—	8	—	—	—	—	36
Edge Tool Manufacturers ...	10	2	1	—	3	—	—	—	101	117
Brickworks	9	27	4	—	3	—	—	—	4	47
Railway Carriage and Wagon Works	6	23	—	—	—	—	—	—	—	29
Hotels, Electric Supply and Public Institutions ...	45	1	—	—	23	—	—	—	2	71
Miscellaneous	100	20	4	—	56	—	—	—	—	180
Totals	429	323	76	372	208	107	227	44	153	1,939

Unfortunately no comparable list is available for past years. It is possible to assert without doubt that every year the number of Factory Chimneys is diminishing rapidly while at the same time the number of works is probably increasing in number. The diminution in chimneys is, of course, due to the large number of works now being run on motive power derived from gas made on the premises or taken from the municipal supply, or from electric energy derived from the municipal supply.

One of the most valuable methods of getting rid of a portion of the black smoke of the City is by promoting the use of gas or electric power to replace steam. To a considerable extent the municipality can and is doing this by offering the cheapest possible supplies to power users.

The table shows also that there are many trades where the use of gas or electricity for heating metals is much more difficult and uncertain to introduce. Even in this group, however, a good many gas plants are in use.

That manufacturing smoke does play a considerable part in producing the gloomy atmosphere of the City can be demonstrated on nearly every Bank-holiday, and especially at Christmas and Easter. Smoke from domestic chimneys is very much less than formerly especially during the summer, owing to the very large use of gas cookers and gas fires by the artisan population of the City. The number of gas cookers and fires in the area of the Birmingham Gas Supply (which extends outside the City area to a slight extent) is at the present time over 115,000, while a year ago it was only 93,000, figures which show clearly the rapid advance in the use of gas for cooking and heating purposes.

It may be said therefore, that every year the condition of the atmosphere as regards smoke is improving.

BLACK SMOKE.

Year.		Number of Observations.	Average number of minutes of black smoke per observation.	Offences reported.	Cautionary letters sent.	Police Court proceedings.	Total amount of fines.			Total amount of costs.			Average fine		
							£	s.	d.	£	s.	d.	£	s.	d.
1901	...	15808	1·34	116	80	35	15	2	6	14	4	0	0	8	7
1902	...	13445	1·26	139	89	50	33	15	0	19	8	6	0	13	6
1903	...	16705	1·27	151	71	80	49	7	6	36	15	6	0	13	2
1904	...	13186	1·39	231	117	98	77	10	0	37	17	6	0	15	10
1905	...	10034	1·95	250	128	109	69	10	0	41	0	0	0	16	2
1906	...	8229	2·27	251	116	115	82	15	0	41	19	6	0	17	1
1907	...	7934	2·29	275	119	116	89	0	0	41	0	8	0	18	11
1908	...	7125	2·47	243	108	111	66	12	6	38	12	6	0	14	6
1909	...	9216	2·24	247	80	94	67	15	0	33	6	0	0	17	7
1910	...	9945	1·99	218	79	75	45	2	6	27	0	0	0	13	11
1911	...	10686	2·18	258	81	109	117	5	0	37	3	6	1	1	9
1912	...	10102	2·44	300	152	108	98	10	0	36	19	0	0	18	3

HEALTH VISITORS' WORK.

The staff of Women Workers in the Public Health Department consists of a Superintendent and Assistant Superintendent of Health Visitors, 19 Health Visitors, four Infant Visitors, one Inspector of Midwives, nine Tuberculosis Visitors, and two Workshops Inspectors.

As regards the 19 Health Visitors, the whole area of the City is divided into 19 Districts, and each Health Visitor supervises one of these districts (in addition to being responsible for one other district in case of the temporary absence of the Health Visitor for it), and visits for certain classes of cases as indicated by the following table. This gives also approximately the number of visits paid during the year, under the various headings :—

	QUARTERS.				YEAR.
	First.	Second.	Third.	Fourth.	
PRIMARY VISITS :—					
Systematic	204	227	454	233	1,118
Births	2,981	3,322	4,594	2,789	13,686
Diarrhœa Deaths	43	27	88	65	223
Measles	1,445	1,886	939	3,444	7,714
German Measles	—	—	—	5	5
Chicken Pox	482	591	358	775	2,206
Whooping Cough	1,666	592	191	143	2,592
Mumps	233	249	102	412	996
Vermin :—					
(*a*) Head	369	364	379	366	1,478
(*b*) Body	396	449	223	419	1,487
(*c*) Head and Body	69	43	43	49	204
Ringworm :—					
(*a*) Scalp	174	164	99	27	464
(*b*) Elsewhere	107	83	43	13	246
(*c*) Scalp and Elsewhere	9	9	9	2	29
Scabies	43	32	29	49	153
Unclassified School Cases	1,554	1,426	1,075	1,896	5,951
Other Visits (not included in above) ...	1,171	1,084	2,074	1,331	5,660
Total of Primary Visits ...	10,946	10,548	10,700	12,018	44,212
Revisits	4,349	4,475	6,222	5,413	20,459
GRAND TOTAL	15,295	15,023	16,922	17,431	64,671

Thus the Health Visitors' work comprises:—

1. VISITS PAID TO THE HOMES AND ALSO TO THE SCHOOLS

in connection with cases reported from the Elementary Council Schools for the following:—

(*a*) *The non-notifiable diseases, Measles, German Measles, Mumps, Whooping Cough, Chicken Pox.*—In every case, besides instructing the mother verbally and by leaflet, how to act, the Health Visitor fills in a form for the information of the School stating which children must be kept at home, either as patients or contacts, and for what period.

A useful part of this work is the detection of Scarlet Fever cases which were thought by the parents (in the absence of a doctor) to be Measles, and which would otherwise have escaped notice. Such cases are asked to call in a doctor.

(*b*) *Verminous Cases.*—These are visited in the homes, and instruction is given to the mother or person in charge as to the best methods of cleansing; or the children are visited in the schools and procedure is taken under the Children Act (Sec. 122) (as fully described in the Annual Report for 1911). During the year 1912 the figures were as follows:—

5,911 verminous cases were reported in writing from the schools.
1,399 first warning notices were delivered at the home of the "responsible parent."
507 children were clean and free from vermin on re-examination.
632 children were cleansed at the Floodgate Street Cleansing Station.
632 second notices, after the cleansing, were sent by post, warning the responsible parent of his liability to prosecution.
36 prosecutions, with convictions and fines.

A large amount of clerical work devolves upon each Health Visitor in the above cases.

(*c*) *Cases of Scabies, Impetigo, Ringworm, and Unclassified illnesses*, are reported from the schools and visited in the homes and instruction is given as to getting medical advice, etc.

2. INFANT VISITING.

(*a*) In addition to the infants visited by the special Infant Visitors around the four consultative centres, each Health Visitor also receives the names of all babies born in her district, and visits certain of these as soon as possible after the first fortnight.

(*b*) *Diarrhœa Deaths.*—Every home is visited in which a child under 2 years of age has died from this disease

(*c*) *Ophthalmia Neonatorum*—Infants notified for this disease are visited primarily in certain cases by the Health Visitors, and secondarily in all cases. (A full report of these is given elsewhere. See page 57.)

3. DIRTY AND INSANITARY HOUSES.

In the course of visits paid to the homes for any of the above reasons, dirty and insanitary houses are detected and become well-known to the Health Visitors, who suggest means of improvement to the tenants, and where necessary, report the same to the Inspector of Nuisances.

4. SPECIAL INSPECTIONS OF SCHOOL CHILDREN (FOR COUNTRY HOLIDAY SOCIETIES)

as to their cleanliness, freedom from Infectious ailments, etc. This averages about one afternoon a week (for one Health Visitor) throughout the whole year; but during July about 2,000 country-holiday children are inspected, and therefore much time is devoted to it. This, however, is a useful work, as the fear of inspection, and possibly the loss of the holiday, acts as an incentive to the children to become clean.

5. HEALTH TALKS.

Requests from different societies, churches, etc., are made during the year or health lectures and talks on "Consumption," "Infant Management," "Cleanliness," "Infectious Diseases," etc., by a Health Visitor. These requests within certain limits are acceded to, 40 talks having been given during the year.

6. SPECIAL REQUESTS FOR VISITS

to be paid by the Health Visitor to certain homes, by clergymen, mission sisters, the National Society for Prevention of Cruelty to Children, the City Aid, Charity Organisation Societies, etc., in addition to many anonymous complaints, all of which receive the necessary attention.

TABLE I.

Vital Statistics of Whole District during 1912 and previous Years.

Year.	Population estimated to middle of each year.	BIRTHS.			Total Deaths Registered in the District.		Transferable Deaths.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Uncorrected	Nett.				Non-residents registered in the District.	Residents not registered in the District.	Under 1 year of Age.		At all Ages.	
		Number.	Number	Rate.	Number.	Rate.			Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1907	808,803	?	23,233	28·8	12,567	15·6	?	?	3,084	133	12,356	15·3
1908	817,060	?	23,986	29·1	12,782	15·5	?	?	3,124	130	12,596	15·3
1909	825,400	?	22,555	27·4	12,573	15·3	?	?	2,727	121	12,398	15·1
1910	833,826	?	22,288	26·8	11,200	13·5	?	?	2,570	115	11,001	13·2
1911	842,337	?	21,975	26·1	12,760	15·2	?	?	3,298	150	12,623	15·0
Averages for years 1907-1911	825,485	?	22,807	27·6	12,376	15·0	?	?	2,961	130	12,195	14·8
1912	850,947	22,186	22,168	26·1	12,131	14·3	338	212	2,470	111	12,005	14·1

Rates in columns 5, 7, and 13 calculated per 1,000 of estimated population.

Total population at all ages at Census of 1911, 840,202. Area of District in acres, 43,537. Number of inhabited houses, 177,030.

Average Number of Persons per house, 4·7.

TABLE II.

Causes of, and Ages at, Death during the Year ending December 28th, 1912.

CAUSE OF DEATH.	AGES.																Males	Fe-males.	Per-sons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
I.—General Diseases.																			
Enteric Fever	—	—	—	1	—	1	1	4	4	10	6	3	—	—	—	—	23	7	30
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smallpox—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*a*) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Not Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Doubtful	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	92	195	124	62	43	53	2	—	—	—	—	—	—	—	—	—	308	263	571
Scarlet Fever	5	14	31	24	23	44	5	2	—	3	2	—	—	—	—	—	66	87	153
Whooping Cough	155	109	33	16	12	6	—	—	—	—	—	—	—	—	—	—	150	181	331
Diphtheria	2	10	13	20	14	35	3	2	—	—	—	1	—	—	—	—	56	44	100
Croup	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Influenza	3	5	—	—	—	1	2	1	4	4	14	14	21	14	10	5	57	41	98
Miliary Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera Nostras...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leprosy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	7	—	—	—	1	—	—	—	—	1	2	4	2	4	2	—	14	9	23
Other Epidemic Diseases ...	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5	6
Pyæmia, Septicæmia	—	—	—	—	—	1	1	1	1	1	2	1	1	3	—	1	7	6	13
Glanders	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax (Splenic Fever) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rabies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	1	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	3	—	3
Mycoses	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pellagra	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beri-Beri...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	5	8	3	2	—	11	23	62	82	232	266	167	94	35	5	—	605	390	995
Acute Phthisis	—	3	1	—	1	—	1	7	10	25	18	6	2	3	—	—	40	37	77
Acute Miliary Tuberculosis ...	3	2	2	—	—	1	1	—	1	2	2	2	—	—	—	—	7	9	16
Tuberculous Meningitis ...	19	14	20	6	3	15	2	3	2	1	3	—	—	—	—	—	45	43	88
Tuberculosis (Periton. Intest.)	15	11	6	1	1	2	3	3	1	—	2	1	1	1	—	—	30	18	48
Tuberculosis (Spinal Column)	—	—	—	—	1	1	1	—	1	3	2	2	1	—	—	—	7	5	12
Tuberculosis (Joints)	—	1	—	—	—	2	—	—	—	2	—	—	—	2	—	—	5	2	7
Tuberculosis (other organs) ...	—	3	1	—	—	1	—	1	1	2	2	2	—	1	—	—	6	8	14
Disseminated Tuberculosis ...	11	3	3	1	1	2	4	1	3	2	2	—	—	1	1	—	22	13	35
Rickets, Softening of Bones ...	4	6	1	1	—	1	—	—	—	—	—	—	—	—	—	—	8	5	13
Syphilis	38	3	—	—	—	—	—	—	—	1	—	3	1	—	—	—	28	18	46
Other Venereal Diseases ...	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	1	3
Cancer (buccal cavity)... ...	—	—	—	—	1	—	1	—	—	—	3	12	13	9	5	—	40	4	44
Cancer (stomach, liver, etc.) ...	—	—	—	—	—	—	—	—	—	5	16	59	82	62	22	3	131	118	249
Cancer (periton., intest., rectum)	—	—	—	—	—	—	—	—	1	3	7	29	44	54	13	1	76	76	152
Cancer (female genital organs)	—	—	—	—	—	—	—	—	—	1	19	32	20	22	6	—	—	100	100
Cancer (breast)	—	—	—	—	—	—	—	—	—	2	12	19	19	19	5	1	—	77	77
Cancer (skin)	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	2	1	3
Cancer (other organs)	1	1	—	1	—	2	—	3	1	9	19	36	37	37	17	2	100	66	166
Other Tumours (undefined) ...	—	—	—	—	—	—	—	—	1	—	—	1	—	3	2	—	4	3	7
Rheumatic Fever	—	—	—	—	2	11	7	6	3	7	10	4	2	—	—	—	20	32	52
Chronic Rheumatism	1	—	—	—	—	1	—	—	1	2	1	3	8	10	6	1	14	20	34
Gout	—	—	—	—	—	—	—	—	—	—	2	—	4	1	3	—	7	3	10
Scurvy	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Diabetes	—	1	—	—	—	1	—	2	3	5	12	11	13	19	7	2	37	39	76

TABLE II.—*continued.*

CAUSE OF DEATH.	AGES.																Males	Females.	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Exophthalmic Goitre	—	—	—	—	—	—	—	—	—	2	2	1	—	—	—	—	—	5	5
Addison's Disease	—	—	—	—	—	—	—	—	—	1	—	1	3	2	1	—	3	5	8
Leucocythæmia, Lymphad'oma	1	—	1	1	—	1	1	—	1	4	1	1	3	—	—	—	8	7	15
Anæmia, Chlorosis	1	—	—	—	—	1	—	1	1	3	4	4	9	5	1	—	15	15	30
Other General Diseases ...	1	2	—	—	—	1	1	—	—	—	1	2	—	4	—	—	7	5	12
Alcoholism	—	—	—	—	—	—	—	—	—	4	7	5	3	—	—	—	13	6	19
Chronic Lead Poisoning ...	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	1	1	2
Other Occupational Poisonings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Chronic Poisonings ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
II.—Nervous System.																			
Encephalitis	—	—	—	—	1	—	—	—	2	3	3	4	4	1	—	—	10	8	18
Cerebro-Spinal Fever	—	—	1	—	—	—	—	—	1	1	—	—	—	—	—	—	1	2	3
Meningitis (other forms) ...	52	28	15	9	8	9	1	1	4	6	2	4	4	—	—	—	77	66	143
Locomotor Ataxy	—	—	—	—	—	—	—	—	—	1	1	9	3	2	—	—	10	6	16
Acute Poliomyelitis	3	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3	1	4
Other Dis., Spinal Cord ...	—	—	—	—	—	—	—	—	—	1	3	2	7	7	3	1	13	11	24
Cerebral Hæmorrhage, Apoplexy	1	—	—	—	—	1	3	—	—	5	25	50	107	147	96	18	209	244	453
Softening of Brain	—	—	—	—	—	—	—	—	—	—	1	4	15	7	6	6	24	15	39
Paralysis (no specified cause) ...	—	—	—	—	—	—	—	—	—	—	4	7	17	23	17	1	34	35	69
General Paralysis of Insane ...	—	—	—	—	—	—	1	1	—	6	20	16	4	3	1	—	40	12	52
Other Mental Alienation ...	—	—	—	—	—	—	—	1	—	—	—	3	4	5	—	—	7	6	13
Epilepsy	—	2	—	1	1	—	1	3	3	10	6	8	15	8	4	—	32	30	62
Convulsions (5 and over) ...	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Convulsions (under 5)	130	26	6	3	1	—	—	—	—	—	—	—	—	—	—	—	110	56	166
Chorea	—	—	—	—	—	2	1	—	—	—	—	—	—	1	1	—	2	3	5
Hysteria, Neuralgia, Neuritis ...	—	—	—	—	—	—	—	—	—	5	5	9	5	3	—	—	7	20	27
Other Dis. of Nervous System...	1	—	3	—	—	3	1	1	1	3	3	6	6	3	1	—	13	19	32
Diseases of Eyes and Annexa...	1	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	3	3
Mastoid Disease	—	1	—	—	—	1	—	—	1	1	—	—	—	—	—	—	2	2	4
Other Diseases of Ears ...	2	1	—	1	3	4	3	2	—	4	—	2	—	1	—	—	12	11	23
III.—Circulatory System.																			
Pericarditis	—	—	—	—	1	—	1	2	1	2	2	1	3	1	2	—	8	8	16
Acute Endocarditis	—	—	—	1	—	4	5	5	4	8	5	7	2	2	—	—	21	22	43
Valvular Disease	—	1	—	2	—	8	10	11	7	25	41	55	77	63	28	3	135	196	331
Fatty Degeneration of Heart ...	—	—	—	—	—	—	—	—	—	1	5	4	20	23	4	—	22	35	57
Other Diseases of Heart ...	3	—	1	—	—	1	4	7	12	23	32	89	124	135	61	11	219	284	503
Angina Pectoris	—	—	—	—	—	—	—	—	—	—	—	4	5	8	2	—	13	6	19
Aneurysm	—	—	—	—	—	—	—	—	—	—	4	10	4	5	1	—	21	3	24
Arterial sclerosis	—	—	—	—	—	—	—	—	—	—	—	2	17	23	14	2	36	22	58
Other Diseases of Arteries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1
Cer. Embolism, Thrombosis ...	—	—	—	—	—	1	—	—	—	—	4	8	10	23	18	—	23	41	64
Other Embolism and Throm. ...	—	—	—	—	—	—	—	—	—	—	1	—	2	—	1	—	1	3	4
Diseases of Veins	—	—	—	—	—	—	—	—	—	1	2	1	3	—	—	—	4	3	7
Status Lymphaticus	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	1
Other Dis. of Lymphatic System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dis. of Circulatory System	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	2	—	2
IV.—Respiratory System.																			
Diseases of Nasal Fossæ ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Larynx	2	2	1	1	1	3	—	—	—	—	—	1	—	—	—	—	8	3	11
Diseases of Thyroid Body ...	—	—	—	—	—	—	—	2	1	—	—	—	1	—	—	—	2	2	4
Bronchitis	177	76	10	5	3	6	1	—	1	7	31	74	181	299	166	33	513	560	1073
Broncho-pneumonia	191	160	56	17	8	10	2	—	—	3	5	7	14	11	19	2	254	251	505
Lobar Pneumonia	13	17	9	4	2	5	6	4	10	17	34	30	25	18	9	—	129	74	203
Pneumonia (type not stated)...	44	31	18	4	12	15	3	6	4	21	32	26	34	49	9	1	159	150	309
Pleurisy	1	2	1	3	2	1	—	—	—	2	8	12	9	4	3	1	36	13	49
Pul. Cong., Pul. Apoplexy ...	8	5	3	1	1	—	—	—	—	2	2	3	7	8	8	5	18	35	53
Gangrene of Lung	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE II.—*continued.*

CAUSE OF DEATH.	AGES.																Males	Fe-males.	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Asthma	—	1	—	—	—	1	—	—	1	1	2	9	14	8	2	—	21	18	39
Pulmonary Emphysema ...	—	—	—	—	—	—	—	—	—	—	—	1	1	5	1	—	7	1	8
Fibroid Disease of Lung ...	—	—	—	—	—	—	—	—	—	—	—	2	4	2	—	—	5	3	8
Other Dis. of Respiratory System	1	—	1	—	—	—	—	—	—	1	2	1	2	2	—	—	8	2	10
V.—DIGESTIVE SYSTEM.																			
Diseases of Teeth and Gums ...	—	1	—	—	—	—	—	—	—	—	2	1	—	—	—	—	3	1	4
Other Dis. of Mouth and Annexa	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	2
Diseases of Pharynx, Tonsillitis	2	1	—	1	1	3	1	—	—	2	—	1	1	—	—	—	3	10	13
Diseases of the Œsophagus ...	—	—	—	—	—	—	—	1	—	—	—	1	—	1	—	—	2	1	3
Perforating Ulcer of Stomach ...	—	—	1	—	—	1	—	3	6	5	13	10	9	3	—	—	19	32	51
Inflammation of Stomach ...	52	9	1	—	—	3	2	—	—	2	1	3	5	6	7	1	53	39	92
Other Diseases of Stomach ...	5	—	—	—	—	1	—	—	—	2	—	2	3	2	1	—	8	8	16
Diarrhœa, Enteritis	198	41	11	9	3	3	2	2	3	7	8	12	12	22	8	5	189	157	346
Ankylostomiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Intestinal Parasites ...	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Appendicitis	—	—	—	1	—	5	7	2	2	8	7	5	1	3	1	—	21	21	42
Hernia	—	—	—	—	—	—	—	2	1	—	1	8	10	4	2	—	10	18	28
Intestinal Obstruction	6	1	1	—	—	1	1	2	2	3	5	2	5	11	15	—	26	29	55
Other Diseases of Intestines ...	2	—	—	—	—	—	—	—	—	—	—	2	2	3	—	—	6	3	9
Acute Yellow Atrophy of Liver	—	—	—	—	—	—	—	—	—	—	—	1	—		—	—	—	1	1
Hydatid of Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver	—	—	—	—	—	—	—	—	—	1	19	22	26	13	3	—	44	40	84
Biliary Calculi	—	—	—	—	—	—	—	—	—	1	—	1	2	6	1	—	5	6	11
Other Diseases of Liver ...	—	—	—	—	—	—	—	—	—	2	2	4	6	4	1	—	4	15	19
Diseases of Spleen	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	2	2
Peritonitis (cause unstated) ...	1	—	—	1	1	3	2	—	1	3	5	1	—	2	1	—	8	13	21
Other Dis. of Digestive System	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	2	—	2
VI.—GENITO-URINARY SYSTEM.																			
Acute Nephritis	2	—	2	—	1	1	2	1	1	8	5	5	9	8	3	1	27	22	49
Bright's Disease	—	—	—	2	—	2	2	5	3	12	34	50	53	82	25	2	144	128	272
Chyluria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dis. of Kidneys & Annexa	—	—	—	—	—	—	—	—	—	1	4	4	2	2	1	—	9	5	14
Calculi of Urinary Passages ...	—	—	—	—	—	—	1	1	—	2	1	1	1	3	1	—	7	4	11
Diseases of Bladder	—	—	—	—	—	—	—	1	2	—	2	3	8	11	5	—	22	10	32
Diseases of Urethra, etc. ...	—	—	—	—	—	—	—	—	—	—	—	1	1	3	—	—	5	—	5
Diseases of Prostate	—	—	—	—	—	—	—	—	—	—	—	—	5	4	7	—	16	—	16
Diseases of Male Organs ..	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	2	—	2
Uterine Hæmorrhage	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uterine Tumour	—	—	—	—	—	—	—	—	—	—	3	2	1	—	—	—	—	6	6
Other Diseases of Uterus ...	—	—	—	—	—	—	—	—	1	1	6	—	—	—	—	—	—	8	8
Ovarian Cyst, Tumour ...	—	—	—	—	—	—	—	—	—	—	3	—	1	1	—	—	—	5	5
Other Dis. of Female Organs ...	—	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—	3	3
Diseases of Breast (non-puer.)	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
VII.—THE PUERPERAL STATE.																			
Accidents of Pregnancy ...	—	—	—	—	—	—	—	—	1	3	5	1	—	—	—	—	—	10	10
Puerperal Hæmorrhage ...	—	—	—	—	—	—	—	1	—	2	10	—	—	—	—	—	—	13	13
Other Accidents of Childbirth...	—	—	—	—	—	—	—	1	1	6	2	—	—	—	—	—	—	10	10
Puerperal Fever	—	—	—	—	—	—	—	1	4	14	8	—	—	—	—	—	—	27	27
Puerperal Alb'ria & Convulsions	—	—	—	—	—	—	—	—	1	4	—	—	—	—	—	—	—	5	5
Puer. Phleg. Dolens, Embolism	—	—	—	—	—	—	—	—	1	2	4	—	—	—	—	—	—	7	7
Puerperal Insanity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Diseases of Breast ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII.—SKIN & CELLULAR TISSUE.																			
Senile Gangrene	—	—	—	—	—	—	—	—	—	—	—	—	1	17	5	1	13	11	24
Gangrene (other types)... ...	—	—	1	—	1	—	—	—	—	—	1	2	1	1	—	—	3	4	7
Carbuncle, Boil	—	—	—	—	—	—	—	—	—	—	—	1	1	3	1	—	4	2	6
Phlegmon, Acute Abscess ...	5	—	—	1	—	—	—	1	—	—	2	4	1	3	4	—	12	9	21
Dis. of Integumentary System	9	—	—	—	—	1	—	—	—	—	—	—	1	—	7	—	11	7	18

TABLE II.—*continued.*

CAUSE OF DEATH.	AGES.																Males	Fe-males	Per-sons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
IX.—BONES AND ORGANS OF LOCOMOTION.																			
Diseases of Bones	2	1	1	—	—	4	4	3	—	2	—	—	1	1	—	—	12	7	19
Diseases of Joints	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	1	1	2
Amputations	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dis. of Locomotor System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
X.—MALFORMATIONS.																			
Congenital Malformations ...	78	3	—	3	—	—	1	—	1	—	—	—	—	—	—	—	41	45	86
XI.—DISEASES OF EARLY INFANCY.																			
Premature Birth	491	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	294	197	491
Infantile Debility, Icterus, etc.	422	19	7	1	—	—	—	1	—	—	—	—	—	—	—	—	254	196	450
Other Diseases of early infancy	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39	31	70
Lack of Care (under 3 months)	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	8	11
XII.—OLD AGE.																			
Old Age	—	—	—	—	—	—	—	—	—	—	—	—	7	157	329	96	250	339	589
XIII.—EXTERNAL CAUSES.																			
Suicide—																			
By Poison	—	—	—	—	—	—	—	1	—	2	2	3	2	1	—	—	6	5	11
By Asphyxia	—	—	—	—	—	—	—	—	1	2	1	—	1	2	—	—	5	2	7
By Hanging, Strangulation...	—	—	—	—	—	—	—	1	—	—	1	5	8	1	—	—	13	3	16
By Drowning	—	—	—	—	—	—	—	1	—	2	3	2	—	—	—	—	5	3	8
By Firearms	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	4	—	4
By Cutting or Piercing ...	—	—	—	—	—	—	—	—	—	1	4	4	2	—	1	—	10	2	12
By Jumping from high place	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	2	—	2
By Crushing	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	1	2	3
Other Suicides	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poisoning by Food	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Acute Poisonings ...	—	—	1	1	—	1	—	—	—	2	—	1	3	—	—	—	8	1	9
Conflagration	—	—	—	—	—	—	—	—	1	—	—	—	—	2	—	—	2	1	3
Burns (conflagration excepted)	7	9	15	13	6	15	4	1	—	5	2	—	—	1	—	—	34	44	78
Deleterious Gases, Suffocation...	94	3	—	—	—	—	—	—	—	—	—	—	1	1	1	—	51	49	100
Accidental Drowning	—	1	1	2	3	8	5	1	1	5	4	6	5	1	1	—	37	7	44
Injury—																			
By Firearms	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	1
By Cutting or Piercing ...	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
By Fall	1	—	—	1	—	—	2	2	1	2	7	5	6	22	11	3	31	32	63
In Mines and Quarries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Machines	—	—	—	—	—	—	—	1	1	—	1	1	—	—	—	—	4	—	4
By Other Crushing	1	1	—	1	1	6	3	3	5	15	8	7	4	4	1	—	50	10	60
By Animals	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Starvation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Excessive Cold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Effects of Heat...	—	—	—	—	—	1	—	—	—	—	—	2	—	—	—	—	3	—	3
Lightning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electricity	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	1
Homicide by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Homicide by Cutting or Piercing	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	1	1	2
Homicide by other means ...	—	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	3	—	3
Fractures (cause not specified)	1	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	2	1	3
Other Violence	3	1	—	—	—	—	1	—	—	—	1	3	—	—	1	—	7	3	10
XIV.—ILL-DEFINED CAUSES.																			
Dropsy	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	2	2
Syncope (1 year and under 70)	—	—	1	—	—	3	—	—	—	3	9	16	24	14	—	—	41	29	70
Sudden Death (not defined) ...	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Heart Failure (1 and under 70)	—	—	—	—	—	—	—	—	1	1	18	14	24	13	—	—	39	32	71
Other ill-defined causes ...	1	3	5	1	—	—	—	—	—	—	—	1	2	—	—	—	6	7	13
Cause not specified	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	3	—	3
Totals	2470	843	414	227	165	334	146	184	219	637	946	1123	1401	1657	1030	209	6187	5818	12005

TABLE III.

Births and Deaths Registered in, or belonging to, each Ward during the Year ending December 28th, 1912.

Causes of Death.	Acock's Green.	All Saints'	Aston	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Enteric Fever	1	4	2	1	...	1	...	...	1	...	...	1	3	1	1	...	...	...	1	2	2	1	...	2	2	...	2	...	1	1	...	30
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	1	39	32	11	103	4	3	2	7	4	...	20	18	12	...	...	16	59	20	86	40	11	...	9	2	17	8	...	32	4	11	571
Scarlet Fever	2	17	7	5	9	3	1	1	6	...	4	7	8	2	1	...	8	12	4	12	11	5	3	...	4	5	4	...	10	1	1	153
Whooping Cough ...	7	21	27	10	42	4	...	2	2	4	5	16	10	4	6	...	21	16	19	29	15	10	6	5	3	6	4	7	10	4	16	331
Diphtheria, Croup ...	4	3	2	6	4	4	1	1	4	1	3	4	3	4	3	1	7	1	12	7	4	3	3	5	2	2	...	2	4	...	...	100
Influenza	4	3	4	5	2	7	1	1	7	3	4	4	6	1	1	1	3	2	3	5	4	3	1	4	4	3	4	6	1	...	1	98
Erysipelas	1	2	1	...	1	...	1	...	...	1	...	2	...	1	...	...	...	2	1	2	1	...	...	3	...	...	1	1	...	1	1	23
Pulmonary Tuberculosis	20	66	49	48	68	23	9	17	17	7	19	64	53	36	16	4	42	72	72	83	66	26	5	22	26	13	45	17	34	23	26	1088
Tuberculous Meningitis	3	1	6	5	2	1	2	...	1	4	3	5	4	2	1	...	2	5	3	7	4	1	1	6	2	5	4	3	1	3	1	88
Abdominal Tuberculosis	1	2	1	2	6	1	...	1	...	...	...	2	3	...	...	...	1	4	2	3	7	1	...	...	3	1	4	...	3	...	...	48
Other Tuberculous Dis.	2	2	4	5	5	...	...	1	3	...	1	3	4	...	...	...	3	5	2	6	6	2	...	3	1	3	1	...	...	1	5	68
Cancer	25	38	29	47	27	43	12	13	23	23	17	36	32	24	31	9	34	37	43	35	29	17	13	16	23	26	25	20	18	11	15	791
Rheumatic Fever ...	3	3	3	3	1	...	1	...	...	1	...	2	1	1	3	...	3	3	5	3	3	1	...	...	5	2	2	1	1	...	1	52
Meningitis	...	8	8	10	19	7	2	...	3	2	3	9	4	3	3	...	6	6	4	11	8	5	1	8	1	3	1	...	7	2	2	146
Diseases of Heart ...	23	57	45	38	42	26	20	11	25	21	18	26	50	19	25	8	44	35	39	39	25	18	23	23	28	28	30	18	36	15	36	891
Bronchitis	13	41	60	38	96	19	10	8	11	4	14	42	36	30	16	3	43	87	83	88	52	30	16	23	32	30	42	16	37	14	36	1073
Pneumonia	17	49	50	26	106	28	13	7	29	8	17	47	41	24	19	3	53	84	36	73	71	21	12	27	22	21	24	13	49	3	24	1017
Other Respiratory Dis.	4	15	8	8	15	10	2	2	5	...	...	3	7	1	6	1	14	11	7	14	7	4	3	4	9	4	7	4	1	3	3	182
Diarrhœa & Enteritis :																																
Under 2 years ...	3	12	11	7	21	3	...	...	2	1	...	13	6	5	3	...	11	19	23	39	15	4	1	...	11	5	10	1	7	3	3	239
Two years and over ...	2	9	6	7	9	5	1	...	3	...	3	3	1	1	1	2	5	3	8	9	4	3	...	...	3	2	5	1	3	1	7	107
Appendicitis, Typhlitis	1	...	1	3	1	1	2	4	1	1	1	...	1	1	1	2	1	1	...	3	...	...	2	1	2	2	4	2	1	2	...	42
Cirrhosis of Liver ...	3	3	2	3	6	6	...	2	3	...	3	2	2	2	3	...	6	6	6	2	4	3	3	3	2	1	2	1	2	2	1	84
Alcoholism	...	...	1	...	...	1	...	1	1	...	...	1	2	...	...	...	1	2	2	2	...	1	...	1	...	1	...	...	...	2	...	19
Nephritis & Bright's Dis	10	19	14	16	13	17	4	3	10	2	10	15	10	10	12	...	11	13	19	15	11	7	4	11	8	6	17	15	5	6	8	321
Puerperal Fever ...	1	1	3	...	...	...	...	...	...	...	...	...	...	1	...	...	2	1	1	...	1	...	...	2	4	2	2	...	5	...	1	27
Other Accidents & Diseases of Pregnancy and Parturition	...	1	7	...	...	2	...	1	2	...	3	1	2	...	3	1	2	4	1	4	...	2	1	...	...	...	5	1	2	...	...	45
Congenital Debility and Malformation, Premature Birth	28	46	59	27	91	26	6	21	19	17	14	38	34	27	22	4	58	66	77	72	51	35	17	17	22	9	30	5	40	22	27	1027
Other Diseases peculiar to Infancy	1	2	6	2	5	1	1	2	...	...	6	2	2	1	1	2	3	5	4	2	1	1	1	3	2	4	4	2	2	...	2	70
Accidents or Negligence	13	21	14	8	33	7	5	4	6	2	4	16	9	10	7	1	14	45	31	29	17	12	5	6	5	5	15	6	17	8	11	386
Suicides...	3	3	2	2	4	5	...	...	4	...	2	1	3	1	1	1	3	4	4	5	5	...	1	1	2	1	2	...	1	...	2	63
Other Defined Diseases	78	123	121	137	161	100	49	53	72	42	58	104	108	59	57	18	102	121	170	133	115	54	29	65	69	80	101	59	84	44	99	2665
Deaths from Ill-defined Causes...	2	9	3	3	9	5	1	1	...	3	4	7	2	4	5	3	4	17	14	16	8	8	...	1	4	...	8	2	9	...	8	160
TOTAL DEATHS ...	276	623	588	483	901	360	147	159	267	151	216	496	465	287	248	64	523	748	716	836	587	289	151	271	303	287	413	203	423	176	348	12005
DEATHS UNDER 1 YEAR	50	121	131	74	266	49	21	34	38	31	38	100	80	59	33	9	126	166	172	209	123	77	33	38	58	44	79	25	90	39	57	2470
BIRTHS	632	1239	1244	911	1476	565	339	351	486	356	477	816	782	428	444	151	1124	1237	1265	1079	919	707	381	671	681	579	880	409	929	358	252	22168

TABLE IV.

Deaths under 1 year Registered in, or belonging to, each Ward during the Year 1912.

Causes of Death.	Acock's Green.	All Saints'.	Aston.	Balsall Heath.	Duddeston and Nechells.	Edgbaston.	Erdington (North).	Erdington (South).	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Rotton Park.	St. Bartholomew's.	St. Martin's.	St. Mary's.	St. Paul's.	Saltley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparkbrook.	Sparkhill.	Washwood Heath.	Yardley.	Not Located.	City.
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
Measles	...	5	9	2	14	1	2	1	2	...	...	3	2	3	...	...	3	10	...	11	8	3	...	...	...	3	1	...	4	...	5	92
Scarlet Fever	...	1	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	5
Whooping Cough	5	9	12	7	18	2	...	1	1	2	2	7	3	3	3	...	7	7	11	11	6	4	4	3	...	4	3	3	6	3	8	155
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
Erysipelas	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	1	...	...	...	1	...	...	1	...	...	...	...	7
Tuberculous Meningitis	1	...	...	1	...	...	...	...	...	1	1	1	2	...	...	...	...	...	...	2	...	...	...	2	...	2	2	1	1	1	1	19
Abdominal Tuberculosis	...	1	...	1	2	...	...	...	...	...	...	1	2	...	...	...	...	1	1	...	1	1	...	...	1	...	2	...	1	...	...	15
Other Tuberculous Diseases	...	1	...	...	2	1	...	...	1	...	...	2	1	...	...	...	1	...	...	4	4	...	...	...	...	...	...	1	...	1	...	19
Meningitis (not Tuberculous)	...	6	2	6	8	3	1	...	1	...	1	4	1	1	1	...	1	2	2	3	3	1	...	2	...	...	...	...	2	1	...	52
Convulsions	2	7	4	5	14	2	5	2	...	2	5	4	9	1	...	...	7	13	5	6	9	6	...	2	4	3	5	2	1	3	2	130
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Bronchitis	1	8	13	6	24	2	1	1	2	1	2	9	6	2	...	...	11	10	15	15	4	6	2	1	11	6	5	5	3	3	2	177
Pneumonia (all forms)	5	15	8	6	36	6	2	1	4	4	4	11	6	7	2	2	13	17	12	16	17	9	4	5	3	7	7	2	16	...	1	248
Diarrhœa	...	1	2	1	5	1	...	...	1	...	...	2	1	3	1	...	2	5	7	13	4	1	...	...	6	2	4	...	1	...	1	64
Enteritis	1	8	9	5	12	1	...	...	1	1	...	7	2	2	2	...	8	9	15	19	8	1	1	...	3	3	6	1	5	3	1	134
Gastritis	2	...	2	2	13	1	1	2	1	2	2	...	...	1	...	1	...	2	2	9	1	1	...	1	...	...	4	1	...	1	...	52
Syphilis	1	2	1	1	3	1	...	...	...	...	...	2	2	1	...	...	3	1	7	3	2	...	...	1	1	...	1	...	1	...	4	38
Rickets	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	4
Suffocation, Overlying	2	4	3	1	15	...	1	...	...	...	...	3	3	3	...	...	3	16	8	13	3	4	1	...	...	1	1	1	3	...	...	89
Injury at Birth	...	2	2	...	...	...	...	1	...	...	1	2	...	1	...	1	1	...	1	1	...	1	...	1	2	2	1	1	...	...	1	22
Atelectasis	1	...	4	2	4	1	1	1	...	...	5	...	2	...	1	1	2	4	3	1	1	...	1	2	...	1	4	1	2	...	1	46
Congenital Malformations	3	4	6	...	1	4	...	6	4	...	...	2	3	2	6	...	3	2	5	2	4	4	1	3	...	1	3	1	5	2	1	78
Premature Birth	15	23	27	15	41	9	5	8	11	15	9	19	20	11	10	2	24	33	27	28	24	18	10	9	12	5	19	1	21	10	10	491
Atrophy, Debility, and Marasmus	8	18	23	10	41	12	1	7	4	1	5	15	10	12	4	2	29	28	39	40	18	11	5	3	9	3	7	2	13	6	15	401
Other causes	3	4	4	3	13	2	1	3	4	2	1	6	3	5	3	...	8	4	10	10	3	4	4	2	6	1	2	2	5	5	3	126
All Causes	50	121	131	74	266	49	21	34	38	31	38	100	80	59	33	9	127	166	172	209	123	77	33	38	58	44	79	25	90	39	56	2470

TABLE V.

Cases of Infectious Disease notified during each week of the year 1912.

Week.		Enteric Fever.	Smallpox.	Scarlet Fever.	Diphtheria.	Erysipelas.	Pulmonary Tuberculosis.	Cerebro-Spinal Fever.	Poliomyelitis.	Puerperal Fever.	Ophthalmia Neonatorum.	Total.
Number.	Ending.											
	1912.											
1	January 6	6	—	78	19	28	86	—	—	2	1	220
2	,, 13	2	—	70	15	16	139	—	—	2	3	247
3	,, 20	—	—	63	19	29	95	—	1	3	1	211
4	,, 27	—	—	68	14	12	78	1	—	—	7	180
5	February 3	1	—	69	16	18	99	—	—	4	6	213
6	,, 10	3	—	57	16	17	110	—	1	—	1	205
7	,, 17	1	—	62	13	15	116	—	—	1	2	210
8	,, 24	3	—	60	15	19	115	—	1	3	2	218
9	March 2	—	—	83	12	20	125	—	—	1	4	245
10	,, 9	4	—	70	25	13	98	—	—	1	2	213
11	,, 16	1	—	62	17	11	113	—	—	1	1	206
12	,, 23	2	—	72	13	12	76	—	—	—	1	176
13	,, 30	2	—	57	11	13	82	—	—	—	4	169
14	April 6	1	—	49	10	11	66	—	1	—	2	140
15	,, 13	—	—	68	12	16	43	—	1	1	3	144
16	,, 20	—	—	56	14	10	69	—	—	2	2	153
17	,, 27	2	—	53	9	16	82	—	1	—	5	168
18	May 4	1	—	73	11	16	120	—	1	—	6	228
19	,, 11	2	—	76	6	17	104	—	—	—	4	209
20	,, 18	—	—	72	12	11	98	—	—	1	5	199
21	,, 25	2	—	70	13	14	96	—	—	2	4	201
22	June 1	—	—	80	19	18	46	—	1	—	3	167
23	,, 8	3	—	64	13	14	79	—	—	2	2	177
24	,, 15	—	—	77	10	16	71	—	—	—	10	184
25	,, 22	2	—	109	24	13	97	—	—	1	7	253
26	,, 29	2	—	88	14	11	76	—	1	—	2	194
27	July 6	1	—	84	11	9	75	—	—	1	2	183
28	,, 13	—	—	108	19	10	99	—	—	2	7	245
29	,, 20	—	—	108	13	15	59	—	—	2	7	204
30	,, 27	—	—	93	16	17	97	1	1	3	7	235
31	August 3	—	—	106	18	10	61	—	2	1	5	203
32	,, 10	2	—	91	11	11	49	—	—	1	8	173
33	,, 17	1	—	112	15	15	56	—	—	1	5	205
34	,, 24	1	—	133	9	9	81	—	1	1	6	241
35	,, 31	1	—	89	6	14	79	—	1	—	3	193
36	September 7	—	—	91	7	10	73	—	—	2	10	193
37	,, 14	1	—	109	11	16	83	1	1	2	2	226
38	,, 21	1	—	159	18	15	66	—	—	2	4	265
39	,, 28	2	—	168	17	7	66	2	—	2	11	275
40	October 5	1	—	151	20	19	84	—	—	1	3	279
41	,, 12	2	—	184	21	20	74	—	—	1	6	308
42	,, 19	4	—	193	22	16	84	—	—	3	4	326
43	,, 26	3	—	221	32	12	80	—	1	3	2	354
44	November 2	7	—	203	25	12	93	—	1	—	3	344
45	,, 9	4	—	210	17	12	96	—	1	1	6	347
46	,, 16	4	—	166	22	14	83	—	—	5	4	298
47	,, 23	8	—	190	22	17	92	—	—	3	6	338
48	,, 30	4	—	178	26	13	80	—	—	4	2	307
49	December 7	4	—	172	14	9	84	—	—	2	8	293
50	,, 14	3	—	134	14	14	85	—	—	5	—	255
51	,, 21	3	—	130	20	17	79	—	—	3	3	255
52	,, 28	5	—	116	9	14	57	—	—	—	6	207
		102	—	5505	807	753	4394	5	18	78	220	11882

TABLE VI.

Cases of Infectious Disease notified during the Year 1912. *Classified according to ages.*

Disease.	Ages.																Totals.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35	45-	55-	65-	75-	85-	
Enteric Fever	...	...	...	1	...	7	9	19	14	31	15	4	2	...	...	...	102
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	33	115	316	442	566	2523	1016	223	95	113	52	7	4	...	...	...	5505
Diphtheria	8	29	51	58	76	296	109	46	51	48	26	7	2	...	...	...	807
Erysipelas	20	19	8	9	4	41	28	39	40	91	136	128	98	65	23	4	753
Pulmonary Tuberculosis ...	1	11	8	2	6	210	295	341	550	1238	927	530	201	68	6	...	4394
Cerebro-Spinal Fever ...	1	1	1	...	1	...	...	...	1	...	...	...	...	...	...	...	5
Poliomyelitis	5	2	2	4	2	1	...	1	...	1	...	...	...	...	...	...	18
Puerperal Fever	...	...	...	...	...	...	...	1	14	47	16	...	...	...	...	...	78
Ophthalmia Neonatorum ...	220	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	220
Total	288	177	386	516	655	3078	1457	670	765	1569	1172	676	307	133	29	4	11882

TABLE VII.

Cases of Infectious Diseases notified during the Year 1912. *Classified according to Wards.*

DISEASE.	Acock's Green.	All Saints.	Aston.	Balsall Heath.	Duddeston and Nechells.	Edgbaston	Erdington North.	Erdington South.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Rotton Park.	St. Bartholomew's.	St. Martin's and Deritend.	St. Mary's.	St. Paul's	Saltley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparkbrook.	Sparkhill.	Washwood Heath.	Yardley	Not located.	City.
Enteric Fever	4	8	9	3	3	4	1	...	2	...	2	4	3	2	4	...	2	...	11	5	8	1	...	2	5	3	3	4	4	1	4	102
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	153	396	352	202	190	108	48	70	155	37	116	214	314	111	68	20	232	253	211	340	282	202	121	46	285	124	160	113	277	78	227	5505
Diphtheria	43	36	15	33	16	29	14	15	41	34	40	29	33	13	29	6	29	21	34	18	23	12	23	33	27	18	21	30	27	15	50	807
Erysipelas	21	51	41	29	57	18	4	10	18	7	14	34	25	10	11	2	35	39	24	39	45	20	12	33	18	9	33	16	26	10	42	753
Pulmonary Tuberculosis	128	263	201	228	275	131	24	50	89	54	67	217	154	120	83	13	185	361	284	245	229	150	43	80	177	66	149	103	132	54	39	4394
Cerebro-Spinal Fever	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	5
Poliomyelitis	1	...	...	...	1	1	1	...	...	...	...	...	1	...	...	...	...	2	3	1	1	2	...	...	1	2	...	...	1	...	...	18
Puerperal Fever ...	4	5	6	2	6	2	...	...	...	...	...	4	3	1	...	1	5	5	4	4	6	1	1	2	3	3	2	1	5	2	...	78
OphthalmiaNeonatorum	4	18	12	7	24	5	1	4	1	5	2	15	4	3	1	1	9	16	20	17	12	4	...	3	3	4	9	2	6	1	7	220
Total	358	777	636	504	572	299	94	149	306	137	241	517	537	260	196	43	497	697	591	669	606	392	200	201	519	229	377	269	478	161	370	11882

TABLE VIII.

Temperature of the Air and Ground, Rainfall, Sunshine, and Wind, in each Month of the Year 1912.
Observed at the Birmingham and Midland Institute Observatory, Edgbaston,
by Mr. Alfred Cresswell.

MONTH.	TEMPERATURE OF THE AIR.						TEMPERATURE OF THE GROUND.		HOURS OF SUNSHINE.		RAINFALL IN INCHES.		DAYS ON WHICH 0·01 INCH OR MORE OF RAIN FELL.	MILES OF WIND.	
	Highest in the shade.		Lowest in the shade.		Mean for the Month.		Maximum at 1 foot deep.	Maximum at 4 feet deep.							
	1912.	Above or below the previous highest. *	1912.	Above or below the previous lowest. *	1912.	Above or below the average. *			1912.	Above or below the average. *	1912.	Above or below the average. *		1912.	Above or below the average. *
JAN....	51·5	— 6·5	21·0	+ 10·2	37·3	— 0·3	45·0	46·3	23	— 11	3·98	+ 2·19	18	8322	—1793
FEB.	56·0	— 5·9	13·4	+ 5·4	40·8	+ 2·5	45·5	44·3	34	— 17	1·57	+ 0·01	17	9278	— 248
MAR.	57·3	— 9·3	33·0	+ 14·0	44·2	+ 3·3	46·0	45·0	83	— 4	3·91	+ 2·11	26	10881	+ 459
APR.	68·8	— 10·2	30·5	+ 3·8	46·5	+ 1·2	49·2	47·0	196	+ 84	0·24	— 1·28	5	9342	— 82
MAY...	73·6	— 5·0	37·4	+ 6·4	53·5	+ 2·1	53·4	49·1	118	— 21	2·58	+ 0·53	14	7205	—1891
JUNE	76·3	— 6·5	44·6	+ 7·0	55·9	— 1·4	56·2	51·4	118	— 27	4·91	+ 2·79	22	7878	— 421
JULY	82·2	— 6·3	45·5	+ 6·0	60·1	—	60·1	53·9	123	— 23	3·40	+ 1·30	17	9081	+ 785
AUG.	66·1	— 27·8	42·1	+ 0·9	54·5	— 4·9	55·0	53·8	98	— 45	6·75	+ 3·93	23	8615	+ 28
SEPT.	63·4	— 27·2	39·0	+ 6·0	51·7	— 4·0	53·5	52·9	87	— 26	0·83	— 0·89	10	8307	+ 371
OCT....	63·0	— 13·5	31·9	+ 4·0	47·2	— 1·3	50·3	51·2	107	+ 38	2·43	— 0·24	10	8065	— 978
NOV.	56·2	— 5·4	26·2	+ 6·2	42·6	— 0·2	48·4	49·4	16	— 20	2·00	— 0·21	15	9691	+ 416
DEC.	56·8	+ 0·8	26·2	+ 11·8	43·5	+ 4·7	46·2	47·3	28	—	3·24	+ 0·61	22	12172	+2897

* In the twenty-five years 1887-1911.

TABLE IX.

Meteorology and Mortality in each week of the year 1912.

Week.					Deaths from						Temperature						
											of the Air.			of Ground			
No.	Ending.	Total Deaths.	Deaths under 1 year.	Deaths 65 and up.	Measles.	Whooping Cough.	Diarrhœa and Enteritis under 2.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Respiratory Diseases.	Highest in Shade.	Lowest in Shade.	Mean of Daily Maxima and Minima.	Highest 4 Feet Deep.	Horizontal Movement of Air in Miles	Hours of Sunshine.	Rainfall in Inches.
1	Jan. 6	277	69	68	1	15	2	28	9	75	51·5	31·9	42·9	46·3	2,148	3·5	0·66
2	,, 13	260	45	79	—	12	2	25	2	65	47·5	28·0	39·3	46·3	1,984	4·9	0·50
3	,, 20	268	67	61	1	10	6	21	3	68	45·2	26·8	37·5	46·0	2,175	1·4	2·22
4	,, 27	261	46	73	—	10	4	22	6	63	41·6	26·9	33·6	45·3	1,498	9·8	0·62
5	Feb. 3	315	56	93	—	20	5	36	4	89	38·1	14·0	28·8	44·0	1,696	6·9	0·02
6	,, 10	414	74	127	—	16	4	41	3	118	52·3	13·4	35·8	43·0	2,339	12·6	0·66
7	,, 17	290	45	81	1	16	2	26	1	88	50·7	34·8	42·6	43·0	1,918	1·6	0·50
8	,, 24	245	53	64	—	12	2	27	1	67	54·1	34·1	45·0	43·9	1,912	4·2	0·19
9	Mar. 2	236	48	58	1	9	—	24	7	50	56·0	36·0	47·9	44·6	3,306	8·9	0·48
10	,, 9	223	46	61	—	11	2	24	6	40	49·8	36·0	42·9	45·0	2,707	25·5	1·57
11	,, 16	224	53	56	—	14	3	23	5	36	54·3	33·0	43·2	44·8	1,697	8·5	0·97
12	,, 23	245	45	75	—	21	1	21	7	49	49·4	33·2	41·4	45·0	1,993	12·5	0·87
13	,, 30	236	59	62	4	18	1	23	5	39	57·3	36·9	48·0	45·0	3,042	26·6	0·15
14	April 6	232	44	58	—	20	4	24	5	32	63·3	32·5	47·7	45·1	2,783	43·5	0·08
15	,, 13	207	42	54	1	14	2	18	5	41	61·3	30·5	44·8	45·9	2,517	41·8	0·21
16	,, 20	242	37	81	1	8	4	26	4	45	66·3	37·0	49·3	46·0	1,333	41·9	0·00
17	,, 27	222	42	51	4	12	2	22	4	36	68·8	39·7	52·2	46·9	2,229	68·4	0·00
18	May 4	217	40	61	4	5	4	20	3	42	60·1	36·6	48·2	47·0	1,628	13·5	0·29
19	,, 11	205	44	52	1	11	4	22	4	32	73·6	42·0	57·0	48·0	1,766	16·2	0·08
20	,, 18	209	46	52	3	10	1	12	4	30	67·1	39,9	52·9	49·0	1,858	36·9	0·58
21	,, 25	194	39	46	4	11	4	21	7	26	63·4	40·0	51·0	49·0	1,566	22·7	1·35
22	June 1	222	40	63	4	5	2	21	2	41	65·8	41·4	55·3	49·1	1,340	48·7	0·43
23	,, 8	208	31	47	1	4	4	20	5	41	60·9	44·6	52·6	49·7	1,262	8·3	1·91
24	,, 15	172	39	31	2	1	1	23	1	30	64·2	44·9	55·4	50·0	1,733	36·8	0·68
25	,, 22	193	36	45	2	4	1	28	7	18	76·3	47·0	58·8	50·8	2,340	32·2	0·46
26	,, 29	174	33	38	2	2	5	19	2	18	67·4	48·6	57·3	51·4	2,164	30·1	1·68
27	July 6	194	39	46	2	4	1	17	2	29	67·1	47·6	55·8	51·6	2,178	5·4	0·89
28	,, 13	189	40	40	7	2	7	24	4	28	79·6	45·5	62·7	52·1	1,905	35·1	0·10
29	,, 20	182	46	33	8	2	3	14	1	19	82·2	46·1	62·9	53·5	2,117	39·6	0·25
30	,, 27	164	40	36	10	2	8	13	5	17	71·7	51·5	61·1	53·7	1,604	16·0	0·97
31	Aug. 3	155	28	38	6	—	6	18	2	16	64·6	42·9	54·9	53·9	2,291	20·9	1·47
32	,, 10	187	44	42	7	1	13	14	4	20	66·1	47·0	55·6	53·4	2,101	23·4	2·07
33	,, 17	180	41	48	3	1	10	20	3	19	60·5	43·1	53·4	53·1	1,919	8·2	0·40
34	,, 24	186	35	42	4	2	10	13	4	31	62·6	43·4	55·2	52·9	1,965	17·5	2·18
35	,, 31	154	38	31	4	—	7	13	1	11	64·3	42·1	54·8	53·0	1,790	21·2	1·80
36	Sept. 7	185	42	44	7	5	8	18	5	11	60·8	44·5	52·7	52·9	2,564	14·6	0·20
37	,, 14	190	34	53	6	2	3	18	3	33	60·6	42·6	51·0	52·8	2,209	7·7	0·18
38	,, 21	214	45	54	13	3	10	21	5	32	63·4	42·2	53·1	52·2	1,453	15·2	0·00
39	,, 28	192	39	54	4	2	3	22	3	18	60·3	39·0	50·0	52·0	1,661	19·8	0·06
40	Oct. 5	209	42	46	12	—	9	22	4	30	59·2	33·0	47·4	51·6	1,555	19·4	0·39
41	,, 12	203	43	48	11	—	9	13	4	34	63·0	37·9	49·9	50·8	1,189	37·3	0·00
42	,, 19	223	55	47	19	—	5	19	6	45	60·0	38·9	48·8	50·3	2,179	15·3	0·12
43	,, 26	220	57	54	15	2	7	20	—	52	54·8	31·9	42·6	50·0	1,512	11·9	1·22
44	Nov. 2	274	57	55	30	2	9	27	1	53	57·3	33·0	46·6	49·6	2,480	7·5	1·08
45	,, 9	302	63	64	39	—	10	20	4	71	56·2	31·7	46·7	49·4	1,516	2·3	0·22
46	,, 16	272	57	45	46	3	1	14	7	62	49·4	35·0	41·7	48·8	3,142	0·6	0·45
47	,, 23	293	56	57	47	—	7	19	4	57	51·7	37·5	45·4	48·0	2,012	1·8	0·11
48	,, 30	276	59	47	45	1	2	20	1	63	51·1	26·2	38·1	47·9	2,591	5·6	1·21
49	Dec. 7	310	62	68	46	—	3	17	5	62	51·3	26·2	41·3	47·3	2,304	2·5	0·29
50	,, 14	297	68	59	51	3	5	22	4	61	56·8	36·3	45·9	46·6	3,074	4·0	1·82
51	,, 21	287	63	52	46	2	6	19	5	62	52·5	33·3	42·9	46·7	2,930	11·6	0·70
52	,, 28	276	58	56	46	1	5	14	5	57	53·2	37·1	44·7	46·4	2,612	0·4	1·13

TABLE X.

Analysis of Corporation Water Supply by the City Analyst.

Date of Receipt of Sample.	PLACE WHERE TAKEN.	Parts per 100,000.								Appearance in 2ft. Tube.			
		Total Solid Matter.	Free Ammonia.	Albuminoid or Organic Ammonia.	Nitrogen in Nitrates.	Oxygen Consumed in 3 hours, at 27° C. (80° F.)	Chlorine in Chlorides.	Hardness (as $CaCO_3$).	Alkalinity (as $CaCO_3$)	Turbidity.*	Red.†	Yellow.†	Blue.†
1912.	CORPORATION WATER.												
Jan. 15	33 Poplar Road	7·0	·000	·003	0	·13	0·9	3·0	2·7	0	0·2	2·0	0
,, 15	36 Aubrey Road	6·8	·000	·004	0	·14	0·9	3·2	2·6	0	0·2	2·0	0
,, 15	Market House, Sherlock St. East	6·6	·000	·003	0	·14	0·9	3·1	2·6	0	0·2	2·0	0
Feb. 12	38 York Road, Edgbaston	6·7	·000	·002	0	·16	0·9	3·2	2·4	0	0·3	2·4	0
,, 12	46 Wordsworth Road ...	6·4	·000	·002	0	·17	0·9	3·2	2·3	0	0·3	2·6	0
,, 12	5 Rocky Lane	6·6	·000	·002	0	·17	0·9	3·0	2·4	0	0·3	2·4	0
Mar. 18	52 Vivian Road, Harborne	6·3	·000	·003	0	·13	0·8	3·0	2·4	0	0·2	2·0	0
,, 18	435 Stratford Road, Sparkhill	5·8	·000	·003	0	·13	0·8	3·0	2·3	0	0·2	2·0	0
,, 18	19 Cato Street North ...	6·3	·000	·003	0	·13	0·8	3·0	2·4	0	0·2	2·0	0
April 22	3 Manor Road	5·9	·000	·005	0	·15	0·8	3·2	2·2	0	0·2	2·2	0
,, 22	51 Oxford Road, Acock's Green	5·7	·000	·005	0	·16	0·8	3·2	2·0	0	0·2	2·4	0
,, 22	37 New Bond Street ...	5·6	·000	·004	0	·16	0·8	3·2	2·1	0	0·2	2·2	0
May 16	441 Hagley Road	5·1	·000	·004	0	·14	0·8	3·2	2·0	0	0·2	2·0	0
,, 16	121 Holyhead Rd., Handsworth	5·0	·000	·005	0	·14	0·8	3·2	2·0	0	0·2	2·0	0
,, 16	247 Icknield Street ...	5·2	·000	·005	0	·14	0·8	3·2	2·0	0	0·2	2·0	0
June 10	61 Irving Street	5·5	·000	·003	0	·12	0·8	3·2	2·0	0	0·2	2·0	0
,, 10	235 Barford Street... ...	5·4	·000	·005	0	·12	0·8	3·2	2·0	0	0·2	2·0	0
,, 10	80 Dawlish Road, Bournbrook	5·5	·000	·004	0	·10	0·8	3·2	2·0	0	0·2	2·0	0
July 15	30 Sandon Road	6·0	·001	·003	0	·14	0·8	3·4	2·3	0	0·2	1·6	0
,, 15	20 Holmwood Road ...	5·7	·000	·003	0	·14	0·9	3·4	2·2	0	0·2	1·8	0
,, 15	24 Milk Street	6·0	·000	·003	0	·15	0·9	3·3	2·2	0	0·2	1·8	0
Aug. 19	6 Holly Road, Edgbaston	6·2	·000	·005	0	·16	0·8	3·5	2·7	0	0·2	2·4	0
,, 19	6 Floyer Road	5·9	·000	·005	0	·17	0·8	3·4	2·7	0	0·6	3·0	0·2
,, 19	28 Hope Street	6·1	·000	·004	0	·17	0·8	3·5	2·7	0	0·6	2·8	0·2
Sept. 16	38 Stirling Road	6·2	·000	·005	0	·19	0·8	3·5	2·8	0	0·8	5·0	0
,, 16	68 Anderton Road ...	5·9	·000	·004	0	·20	0·8	3·4	2·7	0	1·0	5·4	0·4
,, 16	177 Dolman Street ...	6·0	·000	·004	0	·20	0·8	3·4	2·7	0	1·0	5·4	0·2
Oct. 14	27 Earl's Court Road ...	5·8	·000	·005	0	·21	0·8	3·5	2·3	0	1·6	9·0	0·8
,, 14	125 Aubrey Road, Small Heath	5·9	·000	·004	0	·21	0·8	3·5	2·2	0	1·4	8·0	0·6
,, 14	Bk. 16 Cato Street North...	5·9	·000	·005	0	·22	0·8	3·4	2·2	0	1·6	9·0	0·6
Nov. 18	4 Rotton Park Road ...	6·0	·000	·004	0	·21	0·8	3·5	2·5	0	1·0	9·0	0
,, 18	154 Highgate Road ...	5·9	·000	·004	0	·22	0·8	3·5	2·4	0	1·4	8·0	0
,, 18	Bk. 24 Nechells Place ...	6·0	·000	·003	0	·23	0·8	3·5	2·4	0	1·2	9·0	0
Dec. 9	14 Fountain Road ...	6·1	·000	·004	0	·23	0·8	3·5	2·5	0	1·2	6·0	0
,, 9	29 Warwick Road	6·0	·000	·004	0	·22	0·8	3·5	2·4	0	1·0	7·0	0
,, 9	73 Alum Rock Road ...	6·0	·000	·003	0	·23	0·8	3·5	2·4	0	1·2	7·0	0
	SOUTH STAFFORDSHIRE WATER.												
Jan. 15	High Street, Quinton ...	34·4	·000	·004	0·5	·06	2·4	17·1	13·6	3	0·8	2·4	1·4
Feb. 12	College Street, Quinton ...	34·0	·001	·004	0·5	·07	2·4	17·2	13·5	0	0	1·4	0·6
Mar. 18	Ridgacre Lane, Quinton ...	32·9	·001	·009	0·5	·13	2·4	17·2	13·4	0	0	1·2	0
April 22	Hagley Road, Quinton ...	34·1	·001	·008	0·5	·06	2·5	17·2	14·6	½	0	0·7	0·4
May 16	High Street, Quinton ...	33·1	·000	·007	0·6	·05	2·5	16·4	14·4	0	0	0·8	0·6
June 10	Ridgacre Lane, Quinton ...	33·2	·001	·007	0·5	·07	2·5	17·2	14·2	0	0	1·2	0·4
July 15	Meadow Road, Quinton ...	33·0	·001	·005	0·5	·07	2·5	16·8	14·2	0	0	1·4	0·4
Aug. 19	High Street, Quinton ...	34·4	·000	·003	0·4	·05	2·6	17·2	15·0	0	0	1·0	0·8
Sept. 16	Meadow Road, Quinton ...	34·2	·000	·004	0·4	·07	2·5	17·4	15·0	0	0	1·2	0·6
Oct. 14	Bissell Street, Quinton ...	34·3	·000	·004	0·4	·05	2·5	17·4	14·8	0	0	1·0	0·8
Nov. 18	College Road, Quinton ...	36·2	·000	·003	0·5	·03	2·5	18·8	15·7	0	0	0·8	0·8
Dec. 9	Hagley Road, Quinton ...	35·6	·000	·003	0·4	·03	2·5	17·9	15·3	0	0	0·8	0·6

* "0" indicates "clear," "1" indicates "very slightly turbid."

† The colour is expressed in tintometer units. Red with an equal amount of yellow forms *orange*, yellow with an equal amount of blue forms *green*, and equal amounts of the three colours indicate *grey*.